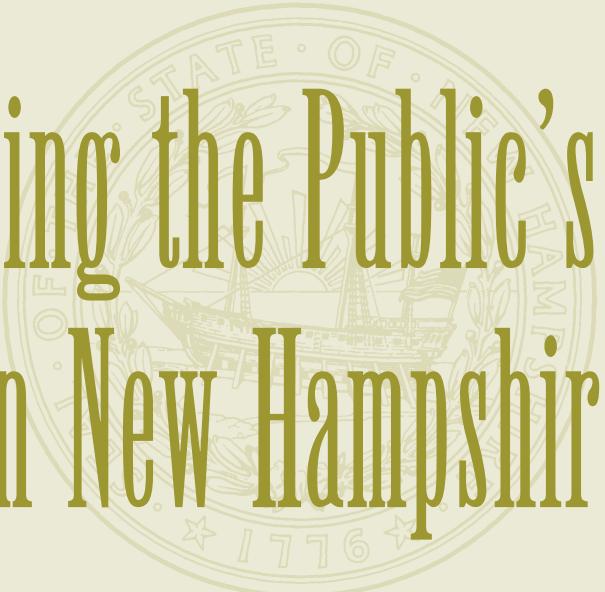


Improving the
Public's Health in
New Hampshire

A PERFORMANCE MANAGEMENT APPROACH





Improving the Public's Health in New Hampshire

A PERFORMANCE MANAGEMENT APPROACH 2005 REPORT

New Hampshire Department of Health and Human Services

Division of Public Health Services

Bureau of Policy and Performance Management

John H. Lynch, Governor

John A. Stephen, Commissioner

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March 2005

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MESSAGE FROM THE COMMISSIONER

I am pleased to present the Department of Health and Human Services' report, *Improving the Public's Health in New Hampshire: A Performance Management Approach*. The report, the first of its kind within the Department, demonstrates the Division of Public Health Services' (DPHS) commitment to continually examine and improve the quality of services we provide to our citizens in New Hampshire.

Using a performance management approach, the DPHS sets performance standards based upon national benchmarks; measures progress in reaching them; reports the progress to stakeholders; and, seeks to continually improve the services it delivers and the delivery system. The report underscores the importance of analyzing and sharing data to prioritize and allocate scarce resources, and improve quality. I believe the report provides an honest assessment of our strengths and challenges in providing critical public health services to individuals and populations in the state.

I think it is important to recognize not only the DPHS staff, but also our partners in the public health system who collaboratively and with tremendous commitment deliver essential public health services every day to the citizens of New Hampshire.

John A. Stephen
Commissioner

Acknowledgments

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Kate Frey, Bureau of Policy and Performance Management

The New Hampshire Performance Management Collaborative, comprised of Division of Public Health Services (DPHS) staff and representatives from community agencies, began working together in January 2004 for the purpose of creating a comprehensive performance management system for the DPHS. This report was developed in pursuit of that goal.

Dedication

This report is dedicated to Dr. Selma Deitch, a renowned and revered pediatrician and a mentor to many in public health in New Hampshire. Dr. Deitch was never satisfied with mediocrity and challenged her public health colleagues to do their utmost to provide high quality and comprehensive health services to vulnerable individuals, particularly children and families. Thus, it is fitting that this report, which promotes excellence in public health, be dedicated to her memory.

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A Note on Race, Ethnicity and Socio-Economic Status

In New Hampshire, as is true elsewhere, poverty and minority status, both together and independently, are often linked with poorer health for some members of our communities. For example, in a study that included male and female African-Americans and Caucasians, low income individuals were diagnosed later than higher income individuals with colorectal, lung, breast, cervical and prostate cancers. In the same study, African-Americans, regardless of income, were diagnosed later than Caucasians. Late diagnosis means that individuals are at a more advanced stage of cancer 'when the disease is first detected, which often leads to poorer treatment outcomes.

While this report does not focus on these differences, it is important to recognize that our population is becoming more diverse and that poverty among children is still a significant problem in our state. Given these facts, our ability to continue to improve our performance and the health of the public will likely be strongly related to our ability to understand and meet the challenges presented by poverty and by the special pressures faced by minority members of our communities.¹

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Purpose of the Report

This report highlights the commitment of the New Hampshire Department of Health and Human Services (DHHS), Division of Public Health Services (DPHS) to the provision of high quality public health services and its increasing efforts to continuously improve these services and, in turn, the health of the public. The purpose of the report is to showcase a sampling of this critically important work carried out by the public health system in New Hampshire and the emphasis placed on quality improvement.

During this time of tightening budgets, public health threats, and emerging public health issues, being accountable for the provision of effective, efficient, science-based, quality services is more important than ever before. DHHS realizes that protecting the public health must be our Department's highest priority, and that we must do so in a manner that maximizes the value we present to the citizens and taxpayers of the state.

To measure and improve the quality of public health services the DPHS adopted a performance management model articulated by the Turning Point Performance Management National Excellence Collaborative. This model, described below, provides a common language and framework for the DPHS and its community partners.

What is Performance Management?

Performance management is the practice of actively using data to measure performance. This practice involves strategic use of measures and standards to establish performance targets and goals. Performance management practices can also be used to prioritize and allocate resources; to inform managers about adjustments or changes in policy or program directions needed to meet goals; to create reports that show how well the public health system is meeting its goals; and most importantly to improve the quality of public health practice.

Performance management is comprised of the following four components:

- 1 Performance Standards** Establishment of organizational or system performance standards, targets, and goals to improve public health practices.

Standards may be set based on national, state or scientific organizations, by benchmarking against similar organizations, or by other methods. An example of a standard is the Healthy People 2010 objective that 75% of women in the early postpartum period are breastfeeding. Another example would be the American Academy of Pediatrics recommendation that 100% of newborns are screened for hearing before leaving the hospital.
- 2 Performance Measures** Development and use of performance measures to assess achievement of such standards.

Measures are the quantitative data used to assess progress toward a target or goal. Staying with one of the examples above, the measure for breastfeeding is the percent of women in the early postpartum period who are breastfeeding.
- 3 Reporting of Progress** Documentation and reporting of progress in meeting standards and targets and sharing of this information with those who can use it to understand and improve practice.

Reporting involves analyzing the data and reporting it back on a regular cycle to those who can use it; managers, staff, policy makers and constituents, in short, getting the information out to those who need it.
- 4 Quality Improvement Process** Establishment of a program or process to manage change and achieve quality improvement in public health policies, programs or infrastructure based on performance standards, measurements and reports.

This model is depicted in the four quadrants in the graphic to the right on page 9.



figure1

Text and graphic adapted from:

Public Health Foundation:

From Silos to Systems:

Using Performance Management

to Improve the Public's Health.

Seattle, WA: Turning Point

National Program Office at the

University of Washington, 2003.¹

Performance Management in Public Health in New Hampshire

Beginning in 2001 under the leadership and vision of William Kassler, MD, MPH, State Medical Director, the DPHS instituted performance-based contracting with its community health providers. Public health services in New Hampshire, such as maternal and child health, primary care, WIC, HIV counseling and testing, dental clinics, and breast and cervical screening are delivered through an array of community-based, health and social service agencies via contracts. Performance measures were integrated into these contracts in July 2001.

Performance measures used in contracts were selected based on **national performance standards** such as Healthy People 2010, Health Plan Employer Data and Information Set (HEDIS) measures, and federal grant requirements. Community health agencies are provided with definitions for performance measures with numerators and denominators, baseline data, sample work plans with suggested activities to meet the goals, and tools to assist in data collection. Agencies are required to set targets for each

measure, to detail activities they will undertake to improve performance, to describe evaluation and monitoring efforts, and to report progress in meeting their targets on an annual basis.

Some programs within the DPHS have progressed from simply reporting on the performance measures to integrating them into a continuous **quality improvement process**. For example, the maternal and child health program provides agencies with performance data from all agencies it contracts with for comparison; feedback on work plans, and holds on-site continuous quality improvement visits to assess performance management.

While the DPHS has done well in implementing three of the four quadrants of the model shown in Figure 1—**performance measures**, **performance standards** and the **quality improvement process**—it has not, to date, put in place a regular practice of **reporting its progress**. This document is the first initiative to report the progress in performance management in public health in New Hampshire.

Our Partners in the Public Health System

The delivery of essential public health services in New Hampshire, from the provision of health care services to data collection, from disease outbreak investigations to linking individuals with health services, takes place in the context of a partnership of diverse organizations that comprise the public health system. These organizations include, but are not limited to: the DPHS, local health departments, public health networks, community health centers, community health agencies, community action programs, community coalitions, public schools, AIDS services organizations, hospitals, visiting nurse agencies and family resource centers. Each organization in the system makes a unique and valuable contribution to the public health of the residents of the state. For each performance measure highlighted in this report, we indicate the key partners and providers that contribute to its success.

Another key partner to be mentioned is the United States Department of Health and Human Services, in particular the Centers for Disease Control Prevention and the Health Services Resources Administration which support programs described in this report with federal funds and guidance.

The Performance Measures

Selecting the Measures for this Report

This section reports progress on selected performance measures utilized by public health programs at the state and community level. The New Hampshire Performance Management Collaborative comprised of the DPHS staff and community health center directors and other community partners (collaborative partners are listed in the Acknowledgments) reviewed thirty-nine performance measures used in contracts with community agencies and by the state DPHS programs to report progress to federal funders. All measures are based on national standards such as Healthy People 2010, federal grant requirements, or come from national authoritative groups such as the American Diabetes Association, American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. A list of all measures reviewed can be found in the Appendix.

The committee determined that this report should focus on a subset of measures that highlight progress in reaching the goals of some of the critical public health programs in the DPHS.

The following criteria were used to select the final measures for the report:

- The data should be available for several years to show trends.
- The data should be reliable, in that we are confident in the accuracy of the data and that it measures what it is intended to measure.
- The measures should reflect both prevention activities and access issues.
- The measures may reflect new and growing initiatives.
- The measures should be a good indicator of whether or not a program or intervention is working.

The measures were not selected to illustrate only areas in which we are doing well. In fact, using the above selection criteria, the measures in this report show that we are excelling in some areas, maintaining in others and have ample work to do to improve in others.

Programmatic Versus Statewide Measures

For the purpose of this report the performance measures are provided for either a specific population for the whole state or a specific population served in a particular program. For example, the percent of newborns screened for hearing before hospital discharge measures the percent of all infants born in the state of New Hampshire who have been screened for hearing before leaving the hospital. Similarly, the percent of high school students smoking measures a representative sampling of all high school students throughout the state who smoke. In such cases when the measures are for the entire state it is because we are seeking to measure the effectiveness of broad based public health interventions and/or policies. In the case of newborn hearing screening, the DPHS, Early Hearing and Detection Program made recommendations to all New Hampshire hospitals to screen newborns for hearing. The program uses this performance measure to track the progress hospitals are making in screening newborns following the release of these recommendations. Examining the percent of high school students throughout New Hampshire helps to evaluate interventions such as mass media messages and youth coalitions throughout the state that provide anti-smoking education and training.

By contrast, the measure which tracks the percent of women in the DPHS Breast and Cervical Cancer Screening Program, *“Let No Woman Be Overlooked,”* who have not had a Pap test for cervical cancer ever or in the last five years, is specific to women in this program. Like many programs in DPHS, this program is geared towards individuals (in this case women) who have not received health care or a particular health screening or service due to a lack of insurance, low-income status, lack of transportation, or language or cultural barriers. Many DPHS programs



employ interventions to address these issues by making them affordable, arranging for transportation, reaching out to prospective clients in their communities, and providing written materials that are in the appropriate language or through the use of interpreters.

In some cases both statewide and program-specific measures are examined for the purpose of comparison and to assess any disparities. For example, the percent of women seeking prenatal care in the first trimester is measured for all women giving birth in New Hampshire, for those enrolled in the Medicaid program and for those enrolled in the DPHS prenatal programs. Such comparisons and disparities can assist program staff to plan for program adaptations for special populations.

The Eleven Measures

Measure	Measured for	Status
Percent of women in the Breast and Cervical Cancer Program receiving a Pap test.	Program	Improving, above national average
Individuals with diabetes and who have had at least two Hemoglobin A1C tests within the last twelve months.	State	Maintaining, above national average
Percent of STD clients with chlamydia who receive clinically recommended treatment.	Program	Doing well
Percent of second and third graders in Oral Health Program-funded, school-based dental programs with sealants.	Program	Maintaining, but room for improvement to meet US Healthy People 2010 objective
Emergency department visits among youths from being an occupant in a motor vehicle crash.	State	Maintaining, but room for improvement to meet US Healthy People 2010 objective
Percent of high school students smoking.	State	Improving, above national average, but room for improvement to meet US Healthy People 2010 objective
Rate of births to high school-aged youth.	State	Improving, above national average
Percent of infants born to women beginning care in the first trimester.	Program and State	Room for improvement
Percent of women smoking during pregnancy.	Program	Room for improvement
Percent of WIC-enrolled infants breastfeeding at hospital discharge.	Program	Improving, above national average, but room for improvement to meet US Healthy People 2010 objective
Percent of newborns screened for hearing before hospital discharge.	State	Doing well

Cervical Cancer Screening

THE MEASURES

This measure reports on the percent of eligible women with the known high risk factor of being rarely or never screened for cervical cancer screened by the DPHS Breast and Cervical Cancer Screening Program. A related US Healthy People 2010 Objective is to reduce the death rate from cancer of the uterine cervix.

The Performance Measure

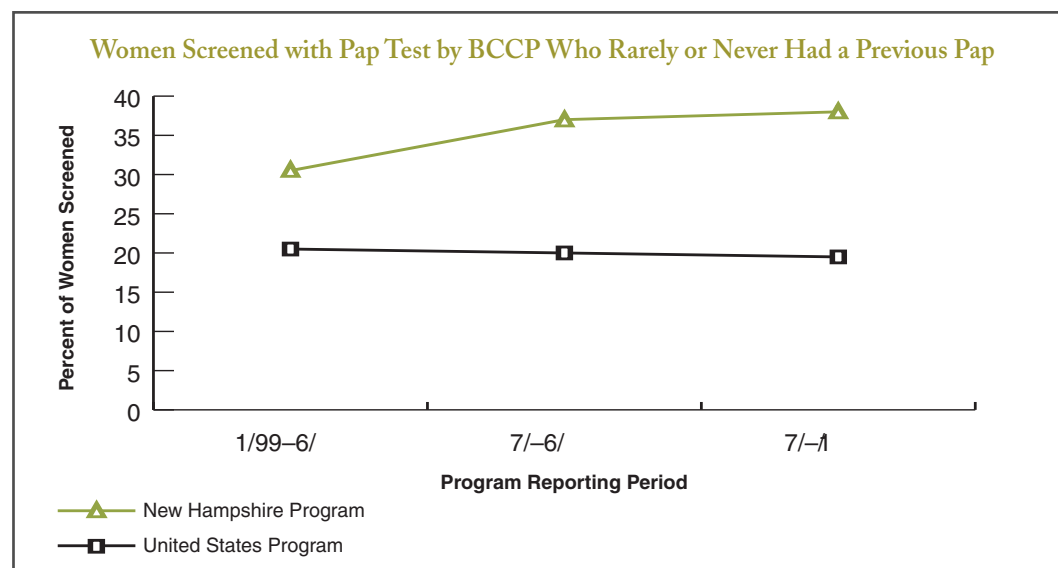
The percent of women screened through the DPHS Breast and Cervical Cancer Screening Program, “*Let No Woman Be Overlooked*,” who have never had a Pap test or have not had one in five years.

The Performance Standard

The Centers for Disease Control and Prevention, Breast and Cervical Cancer Program, “*Let No Woman Be Overlooked*” funds the New Hampshire program and requires that at least 20% of women enrolled in the program meet the criteria of never or rarely being screened (not screened within the last five years). This requirement emphasizes the program’s intent to reach out to high risk women who do not seek routine care.

Cervical Cancer Screening Facts

- Any woman who has a cervix can get cervical cancer, especially if she or her sexual partner has had sex with several other partners.
- Most often, cervical cancer develops in women aged 40 or older.
- Abnormal cells in the cervix and cervical cancer do not always cause symptoms, especially at first. That is why getting tested for cervical cancer is important, even if there are no symptoms.
- Cervical cancer can usually be prevented or cured if women are screened regularly with the Pap test and treated early if cancer is present.



Source: CDC National Breast and Cervical Cancer Early Detection Program, Minimum Data Elements (MDE) Report (See Table 1 on page 40).

figure2

What the Numbers Mean

“*Let No Woman Be Overlooked*” New Hampshire program data from the last three years indicates 36% of the women who received a Pap test have a screening history of being rarely or never screened. New Hampshire’s program currently exceeds the national program average of 21%. These data indicate that the program is reaching the population for whom it was intended, women who may not otherwise receive cervical cancer screening due to income or lack of insurance.



The Consequences

It is estimated that during 2004, about 10,520 women in the United States will be diagnosed with cervical cancer, and 3,900 women will die of the disease.¹ Since the Pap smear became a regular part of a woman's routine gynecological exam there has been a decline in the death rate from cervical cancer. Because of the increasing prevalence of the human papilloma virus, a sexually transmitted disease and a risk factor in the development of cervical abnormalities, this simple method of early detection is critically important in the sexually active population.

Unfortunately, many women remain unscreened or screened at intervals less frequent than recommended, resulting in women needlessly developing and dying from cervical cancer. The cost of a Pap smear is \$14.76. The estimated annual cost for treatment of precancerous abnormal Pap tests is estimated at \$1,281 per person and \$3.6 billion for women in the United States. Estimated costs for cervical cancer per woman range from \$20,225 to \$36,912 dependent upon the extent of the disease. For all women in the United States the annual cost of cervical cancer is estimated to be \$146.4 million.²

Providers and Partners Working on this Measure

The DPHS Breast and Cervical Cancer Screening Program, "*Let No Woman Be Overlooked*" collaborates with:

- Community health centers
- Private health care providers
- Hospitals

What We Are Doing to Improve the Public's Health Relative to this Measure

Various reasons have been identified for this lack of adequate screening, not the least of which is that many women find the exam to be embarrassing, as well as unpleasant or uncomfortable. Age, income, fear of cancer, availability of screening, transportation, cultural attitudes, poor understanding of the need for screening and lack of proper referral are also factors which deter woman from screening. The Breast and Cervical Cancer Screening Program works statewide to address all of these barriers through client and health care provider education and outreach.

The Breast and Cervical Cancer Program delivers state of the art education and program information to health care providers, through newsletters, direct mailings, trainings and topic specific lunch and learn programs delivered at the provider offices.

Outreach initiatives for underserved women include sharing information and one on one counseling through a peer volunteer Community Health Worker Program. Education is provided at such non-traditional settings as local businesses, human services agencies, cultural festivals, farmer's markets, food pantries and sporting events. Education is also provided through mass media (newspapers, radio and cable access TV), brochure distribution, direct mailings and newsletters.

Diabetes & Hemoglobin A1C Testing

THE MEASURES

This measure reports on the percent of individuals in New Hampshire with diabetes who have been tested at least twice a year for Hemoglobin A1C.

The related US Healthy People 2010 and Healthy New Hampshire 2010 objective is for at least 50% of adults with diabetes to have an A1C test at least once during the past twelve months.

The Performance Measure

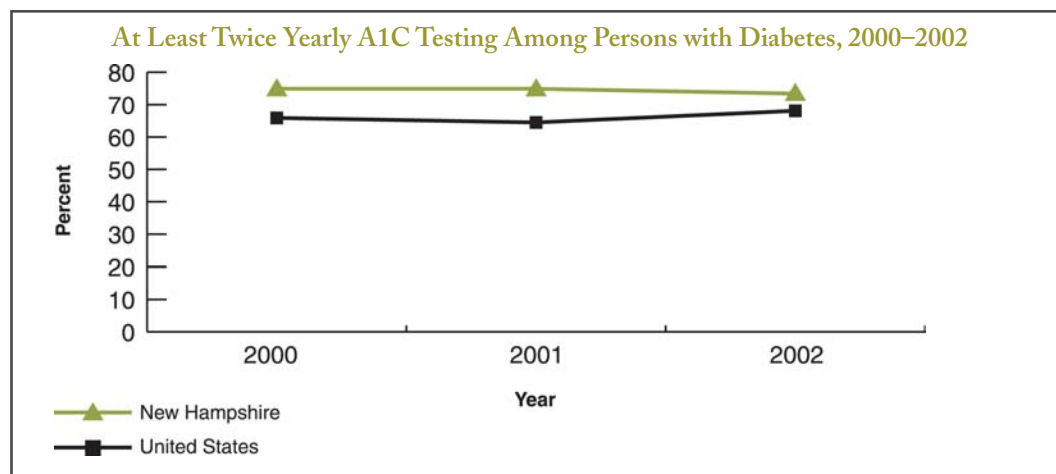
The percent of individuals in New Hampshire who have been diagnosed with diabetes and who have had at least two Hemoglobin A1C tests within the last twelve months.

The Performance Standard

The American Diabetes Association recommends that A1C tests be performed at least two times a year for patients who meet treatment goals, and quarterly for patients who do not or whose therapy has changed.¹

Hemoglobin A1C Facts

- The Hemoglobin A1C test is a measurement of the overall control of blood sugar (glucose) for a person with diabetes. It measures the amount of glucose present on each red blood cell. Since the average red blood cell survives about four months, it provides a measure of the average blood glucose levels over that time span.
- Many specialists believe A1C is the best measure of diabetic control.
- Unlike fasting blood sugar tests, the A1C result cannot be manipulated through short-term diet control.



Source: Behavioral Risk Factor Surveillance System (See Table 2 on page 40).

figure3

What the Numbers Mean

Data collected from the Behavioral Risk Factor Surveillance System (BRFSS) shows that the percent of New Hampshire adults with diabetes having two or more A1C tests per year is higher than the percent among adults with diabetes in the United States. In 2002, 73.4% of adults with diabetes in New Hampshire were tested at least twice for A1C while the percent was 68.1 for adults with diabetes in the United States.

New Hampshire's rate among adults with diabetes having two or more A1C tests per year was constant over the three-year period.



The Consequences

When people with diabetes do not have regular A1C tests, it is more difficult to monitor blood sugar levels effectively and take prompt action to lower them. Without intervention such as diet modifications, exercise and medication, chronic elevated blood sugar levels over time may result in many serious and costly conditions. For example, people with diabetes are twice as likely to die of heart attacks. Diabetes is the leading cause of blindness and lower extremity amputation in the United States.

The cost of these conditions to individuals includes decreased life span, disability and loss of income. The nation spends about \$13,243 on each person with diabetes, compared to \$2,560 for people who do not have diabetes. After adjusting for difference in age, sex and race/ethnicity between people with and without diabetes, one study found that people with diabetes incur medical expenses that are about 2.4 times higher.²

Providers and Partners Working on this Measure

The DPHS, Diabetes Education Program collaborates with:

- Health care professionals including certified diabetes educators, primary care physicians, endocrinologists, optometrists, ophthalmologists, podiatrists, dentists and pharmacists
- Insurance companies, managed care organizations, Medicare and Medicaid
- Clinical sites housed in community health centers
- New Hampshire Department of Education
- New Hampshire Association of Diabetes Educators
- North Country Health Consortium
- Area Health Education Consortium
- Community Health Access Network
- Northeast Quality Health Care Foundation
- Minority Health Coalition

What We Are Doing to Improve the Public's Health Relative to this Measure

The Diabetes Education Program works with partners to provide education regarding the most current diabetes treatment and prevention information to individual clients, health professionals and schools. The New Hampshire Association of Diabetes Educators assists in presenting the annual New Hampshire Diabetes Today conference and in publishing the NH Guidelines for Diabetes Care. The New Hampshire Department of Education works with the Diabetes Education Program, School Health Committee to distribute *Helping the Student with Diabetes Succeed, A Guide for School Personnel*. The North Country Health Consortium and the Area Health Education Consortium coordinate professional education sessions throughout the state.

Several agencies assist the Diabetes Education Program in monitoring A1C rates. The Northeast Health Care Quality Foundation and all of New Hampshire's managed-care organizations monitor the rate of A1C testing of patients at physician offices. The Community Health Access Network coordinates data collection for all the Diabetes Education Program clinical sites. The American Diabetes Association recommends that patients with diabetes should maintain their A1C level at less than a 7% level, which corresponds with good glucose control during the past three months.³ The Diabetes Education Program clinical sites will establish goals for this indicator during the coming year.

Future initiatives will focus on collaborating with the Minority Health Coalition to reach minority populations who face barriers to optimal diabetes care and prevention due to language, culture, geography, finances, insurance and transportation.

Chlamydia

THE MEASURES

This measure reports on the percent of individuals diagnosed with chlamydia receiving clinically recommended treatment in the DPHS, STD Program clinics. A related US Healthy People and Healthy NH 2010 objective is to reduce the incidence of chlamydia among adolescents and young adults.

The Performance Measure

The percent of clients at the DPHS, Sexually Transmitted Disease Program (STD) publicly funded clinics with a laboratory diagnosis of chlamydia that receive clinically recommended treatment within 30 days of diagnosis.

The Performance Standard

The Physician’s Desk Reference (PDR) and the Nursing Drug Reference detail clinically recommended treatment for chlamydia followed by the STD Program and clinics.^{1,2}

Chlamydia Facts

- Chlamydia is the most common bacterial sexually transmitted disease (STD) in the United States.
- Chlamydia is an infection that is most frequently contracted through sexual contact with an infected individual.
- Most individuals do not know they are infected with chlamydia because they do not experience symptoms.
- Chlamydia is generally treated with a single dose or series of doses of an antibiotic.

Number of Chlamydia Diagnoses and Percent Receiving Clinically Recommended Treatment* in New Hampshire STD clinics, 2002 and 2003		
Year	2002	2003
Number of Cases	270	300
Percent Adequately Treated	95.9	96.3

Source: The NH Communicable Disease Surveillance (See Table 3 on page 40).
*The Physician’s Desk Reference defines clinically recommended treatment.

figure4

What the Numbers Mean

In 2002 and 2003, over 95 percent of clients seen in publicly funded STD clinics who tested positive for chlamydia received clinically recommended treatment within 30 days of their diagnosis. An additional number of clients received clinically recommended treatment 31 days or more post diagnosis. However, each year approximately three percent of clients diagnosed with chlamydia did not receive clinically recommended treatment for their infection despite aggressive follow-up.



The Consequences

If a chlamydia infection is not treated in women, it can lead to scarring of the reproductive organs, pelvic inflammatory disease (PID) and infertility. It can also lead to premature labor and can be transmitted to an infant during delivery. In men, chlamydia infection can lead to scarring of the reproductive organs, infection of the testicles (or epididymitis) and infertility, although this occurs less frequently than it does in women. Beyond the health burden of chlamydia, there is an economic burden. According to the Kaiser Family Foundation, the estimated cost for individuals infected with chlamydia ages 15 to 24 in 2000 was \$20.00 for men and \$244.00 for women. These costs included not only diagnosis and treatment, but also associated negative health outcomes if treatment is not received. The majority of the cost for women was related to untreated cases that resulted in PID and infertility.³

Providers and Partners Working on this Measure

In New Hampshire, the DPHS, STD Program contracts with clinics to provide chlamydia testing and treatment at:

- Local health departments
- Community health centers
- Infertility Prevention Project sites located in family planning programs throughout the state

What We Are Doing to Improve the Public's Health Relative to this Measure

In New Hampshire, chlamydia testing is provided free or on a sliding fee scale at 20 STD clinics across the state. The clinics are distributed so that any New Hampshire resident can access services no more than one hour away from their home. The cost of testing and treatment in a publicly funded STD clinic for the state of New Hampshire ranges from \$8.00 to \$25.00 per client. This amount is much less than the costs associated with hysterectomy and infertility treatments, which may be needed if chlamydia infection is left untreated. Additionally, staff at publicly funded STD clinics and disease investigation specialists at the DPHS, STD Program follow-up with clients who have chlamydia and have not received adequate treatment. The work of this staff likely contributes to the high proportion of individuals who receive adequate treatment and also helps to impede the spread of disease. The same staff can also confidentially refer partners of infected clients to be tested and treated. Overall, these programs and activities provide New Hampshire residents with timely chlamydia screening, diagnostic services and treatment.

Dental Sealants

THE MEASURES

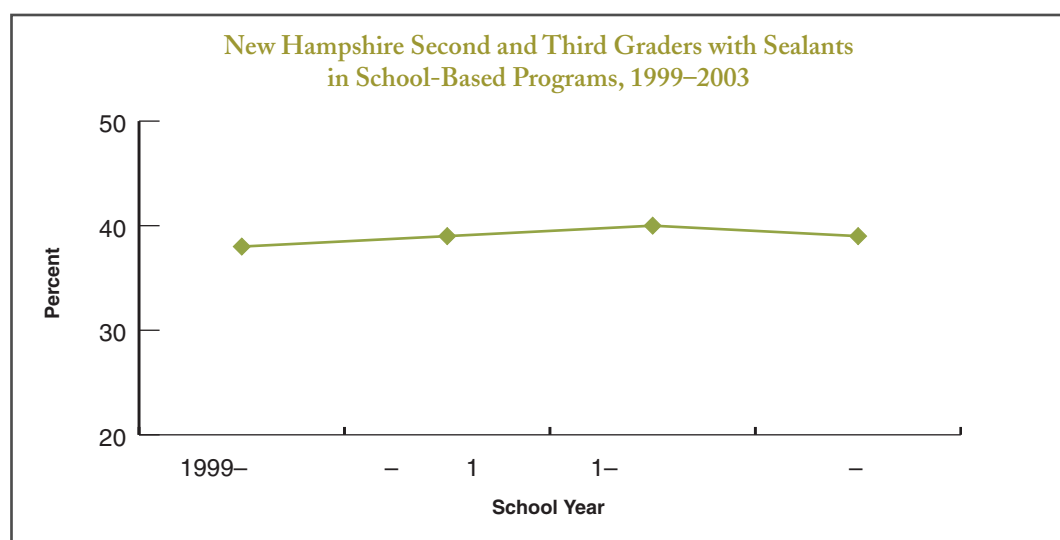
This measure reports on the percent of second and third grade children seen in DPHS, Oral Health Program-funded school-based dental clinics who have at least one sealant on their teeth. A related US Healthy People 2010 objective is to provide sealants to 50% of children aged eight years.

The Performance Measure

The percent of second and third graders seen in the DPHS, Oral Health Program-funded school-based dental programs, who have at least one dental sealant on a permanent molar.

Dental Sealants Facts

- Dental sealants are thin plastic coatings that are applied to the grooves on the chewing surfaces of the molars to prevent tooth decay by creating a physical barrier against bacterial plaque and food.
- Approximately 84% of decay in children 5–17 years of age occurs on the surfaces that can be protected by sealants.
- Sealants result in a 60% reduction in decay in grooves in the back teeth.



Source: New Hampshire Oral Health Data, 2001, 2002, 2003 (See Table 4 on page 41).

figure5

What the Numbers Mean

The proportion of second and third graders seen in school-based dental programs in New Hampshire who have sealants has remained steady at about 40% for the last four years. Data from the 2004 New Hampshire Third Grade Oral Health Survey suggest that children of lower socioeconomic status (SES) are less likely to have sealants than more affluent children. (38% in lower SES schools where at least half the students are eligible for free and reduced lunch versus 47% in higher SES schools.)



The Consequences

Targeting children at risk for tooth decay and applying dental sealants can result in considerable savings for society.¹ In 1999 the average cost of applying one dental sealant was \$27.00, compared with the average cost of \$73.77 for filling one cavity.² Dental decay can lead to tooth loss, which is associated with quality of life, daily functioning and self-image. Approximately 22% of persons over 65 years of age in New Hampshire have lost all of their teeth. As life expectancy increases, it is more important than ever for the elderly to retain as many teeth as possible. Preventing tooth loss starts through prevention during childhood. Sealants and fluoride are the two main public health measures available to prevent tooth decay.

Providers and Partners Working on this Measure

The DPHS, Oral Health Program collaborates with:

- Private dental offices
- Public health dental centers housed in community health centers, hospitals and other community agencies
- Public school-based dental programs funded by the DPHS, the Endowment for Health and the New Hampshire Dental Society
- The New Hampshire Medicaid Program

What We Are Doing to Improve the Public's Health Relative to this Measure

During the 2002–03 academic year school-based hygienists saw a total of 7,609 second and third grade students in 16 New Hampshire school-based dental programs and monitored the percentage with sealants on their permanent molars. In 2001–02 three school-based clinics placed sealants on the teeth of 200 children. The Oral Health Program received a three-year grant from the Endowment for Health to develop a statewide sealant project that began in the fall of 2004. Sealants are being provided in all 16 existing school-based dental programs, and in an additional six high-risk Title I schools. (Title I schools are schools with 50% of the student population eligible for free and reduced lunch.) Any second grade student who has not received dental care in the previous 12 months is eligible for sealants. These eligibility criteria allow us to target our efforts at those students in greatest need. It is anticipated that 500 children will receive sealants in the 2004–05 academic years. We expect to increase the additional number of children who receive sealants through this program each year.

Youth Emergency Department Visits Due to Motor Vehicle Crashes

THE MEASURES

This measure reports on the rates of youth seen in emergency departments due to motor vehicle occupant-related crashes in New Hampshire.

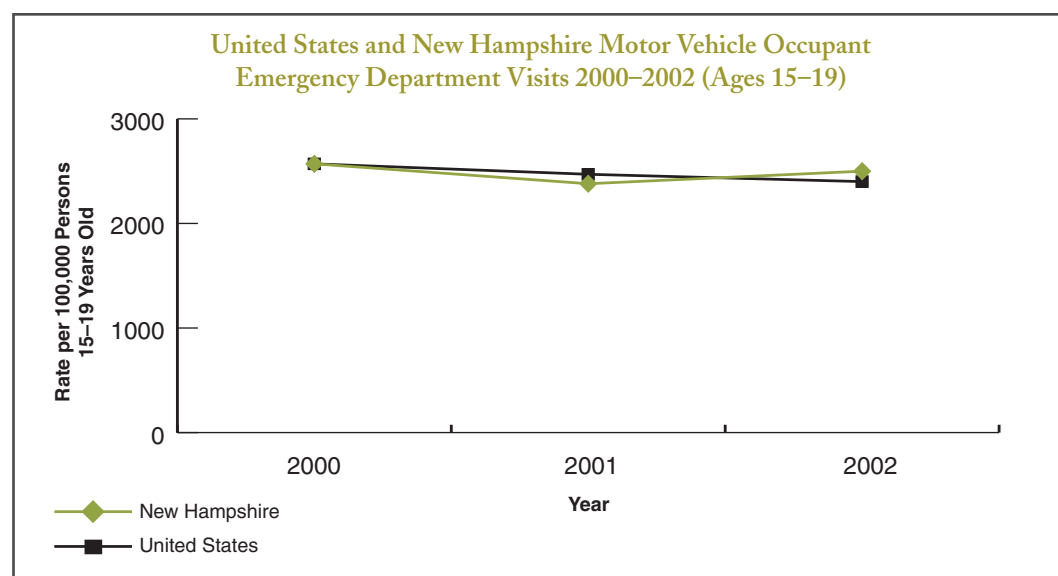
A related Healthy New Hampshire 2010 objective is to reduce the rate of emergency department visits caused by motor vehicle crashes (for all age groups) by 30% per 100,000.

The Performance Measure

The rate (per 100,000 youth) of emergency department visits among youths in New Hampshire aged 15–19 resulting from being an occupant in a motor vehicle crash.

Emergency Department Visits for Youths Due to Motor Vehicle Crashes Facts

- Motor vehicle crashes are the leading cause of emergency department visits for 15 to 19-year-olds in New Hampshire, with many of these injuries involving young people traveling as passengers.
- In New Hampshire, emergency department visits due to motor vehicle crashes are most common in youth aged 15–19.¹
- The risk for a motor vehicle crash is higher among 16 to 19-year-olds than among any other age group. Per mile driven, teen drivers are four times more likely than older drivers to crash.²
- Effective prevention strategies include increasing safety belt use, reducing impaired driving and addressing the inexperienced driver through the youth operator's license.



Source: Health Statistics and Data Management Section, DPHS
Office of Statistics and Programming, National Center for Injury Prevention and Control,
CDC Web-based Injury Statistics Query and Reporting System (WISQARS) (See Table 5 on page 41).

figure6

What the Numbers Mean

The rate of emergency department visits for New Hampshire youth age 15–19 years old decreased from 2000 to 2001, and has since remained stable. The decrease seen has not been studied, however, it is suspected that it may be due to the revision of the New Hampshire seat belt law in the late 1990's to include children through age 17 years.



The Consequences

In 2002, the estimated cost of fatal and non-fatal police-reported crashes involving drivers aged 15 to 20 was \$40.8 billion in the United States.³ Two of five deaths among US teens are the result of a motor vehicle crash.⁴ Teens are also more likely than older drivers to underestimate the dangers in hazardous situations, have less experience coping with such situations, are more likely to speed, run red lights, make illegal turns, ride with an intoxicated driver, and drive after using alcohol or drugs.⁵ Compared with other age groups, teens have the lowest rate of seat belt use.⁶ One factor elevating the death rate of teenage passengers is their frequent travel with teenage drivers. The increased risk with passengers present is thought to be largely the result of distraction and risk taking factors. From 1997–2001 in New Hampshire, there were 438 hospitalizations due to motor vehicle crashes in youth aged 15 to 19 years.¹

Providers and Partners Working on this Measure

The DPHS, Injury Prevention Program collaborates with:

- Injury Prevention Center at Dartmouth College through contract with the DPHS
- Buckle Up New Hampshire Coalition
- Intersections Project, which links the public health, safety and first responder community
- New Hampshire Department of Safety and Transportation
- Governor's Traffic Safety Commission
- New Hampshire Teen Motor Vehicle Legislation Coalition
- Concord Community Coalition
- New Hampshire Highway Safety Agency

What We Are Doing to Improve the Public's Health Relative to this Measure

Professionals in several areas are examining multiple data sets including death records, information from the Fatal Accident Reporting System, hospitalization records, restraint use and EMS run data to assist in designing prevention efforts. Such prevention efforts include: increasing safety belt use, the reduction of alcohol and other impaired driving and addressing the inexperienced driver through the youth operator's license which imposes a late-night curfew and limits the number of young passengers riding in the vehicle.

Buckle Up New Hampshire works with teen groups to encourage seat belt use. The New Hampshire Highway Safety Agency supports statewide enforcement of the state's primary seat belt law for those 17 and younger. The Intersections Project is working with partners on issues related to impaired driving as it affects teenage drivers and passengers.

In September 2003 the DPHS Bureau of Health Statistics and Data Management and Injury Prevention program released the report "NH Injuries, 1999–2001." Subsequently, the Injury Prevention Program's Advisory Committee determined model recommendations to reduce death and injury due to motor vehicle crashes and developed an action plan to implement these goals and objectives in September 2004. A formal version of the State Injury Prevention Plan is slated for release in early 2005. Through these efforts, it is anticipated that Healthy NH 2010 goal to reduce the rate of emergency department visits for those 15–19 in motor vehicle crashes can be reached.

Youth Smoking

THE MEASURES

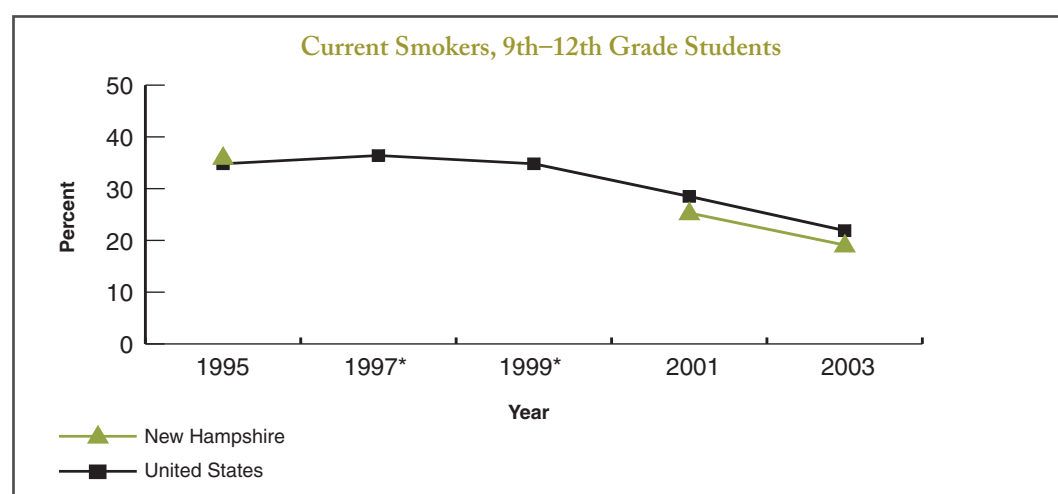
This measure reports on the percent of youth smoking in New Hampshire. A related US Healthy People 2010 objective is to reduce youth smoking to 16%.

The Performance Measure

The percent of ninth–twelfth graders in New Hampshire who have smoked a cigarette on one or more of the previous 30 days.

Youth Smoking Facts

- “Smoking causes significant health problems among adolescents, including increased number and severity of respiratory illnesses, decreased physical fitness and reduced lung function.”¹
- “People who begin to smoke at an early age are more likely to develop severe levels of nicotine addiction than those who start at a later age.”²
- Effective strategies to reduce the prevalence of youth tobacco use include mass media campaigns with educational and community components.³
- Other strategies to reduce youth smoking prevalence recommended by the Centers for Disease Control and Prevention/Office on Smoking and Health include: development and adherence to effective school tobacco policies and strong, multiyear prevention units built into school health education curricula.⁴



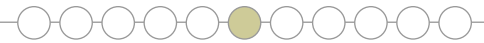
*New Hampshire data are not presented for 1997 and 1999 due to low response rates.
Source: Youth Risk Behavior Survey and Youth Tobacco Survey (See Table 6 on page 41).

figure 7

What the Numbers Mean

The youth current smoking rate is the primary measure used to monitor tobacco use among youth. The Youth Risk Behavior Survey and the Youth Tobacco Survey measure youth smoking rates. In 2003, 19.1% of New Hampshire high school youth were current smokers. Nationally, in 2003, 21.9% of high school youth were current smokers.

The prevalence of current cigarette smoking among high school students in both New Hampshire and the United States has declined since the mid-1990s. CDC has suggested factors contributing to the decline in youth cigarette use may include: “1. A 90% increase in the retail price of cigarettes during December 1997–May 2003; 2. increases in school-based efforts to prevent tobacco use; and 3. increases in the proportion of young persons who have been exposed through the mass media to smoking-prevention campaigns funded by states or the American Legacy Foundation.” While citing the declines documented by the National Youth Risk Behavior Survey, CDC also reported that other national surveys found this decline in youth smoking leveling off.⁵



The Consequences

Tobacco use is the leading cause of preventable premature death in New Hampshire and the United States.⁶ In New Hampshire, there are nearly 1,700 deaths per year attributable to smoking, approximately 18% of all deaths.⁷ 31% of smoking-related deaths are due to cardiovascular disease, 29% to respiratory disease and 40% to cancer.⁷ Smoking-related medical costs in New Hampshire total approximately \$440 million per year.⁸ Nearly 80% of New Hampshire adults who have been regular smokers at some time during their lives began smoking before they were 18.⁹ Approximately one in three youth smokers will eventually die of tobacco-related disease.¹⁰ Failing to prevent initiation of tobacco use by youth will result in additional premature deaths.

Providers and Partners Working on this Measure

The DPHS, Tobacco Prevention and Control Program collaborates with:

- American Lung Association of New Hampshire
- The Endowment for Health
- American Cancer Society, New Hampshire
- American Heart Association, New Hampshire
- New Hampshire Medical Society
- New Hampshire Department of Education
- Youth Network Opposing Tobacco
- Statewide Community Tobacco Prevention Coalitions
- Smoke Free New Hampshire Alliance

What We Are Doing to Improve the Public's Health Relative to this Measure

The New Hampshire Department of Health and Human Services has had programs in place to reduce youth tobacco use since 1996. These have included school and local community-based prevention programs, youth cessation programs, mass media prevention messages and training to empower youth to make healthy choices.

In 2003 and 2004, the Tobacco Prevention and Control Program worked with communities to increase membership in the statewide youth empowerment organization, the New Hampshire Youth Network Opposing Tobacco (YNOT). During that time YNOT grew from 200 members in eight groups around the state to over 1,000 members in 20 groups. These youth members, ages 11 to 18 years, provide training and education to empower their peers to avoid tobacco use, and to make positive choices. The YNOT members delivered the anti-tobacco message to an estimated 100,000 students over the last year. Local community coalitions include youth in their membership and outreach to their communities.

Births to Young Teens

THE MEASURES

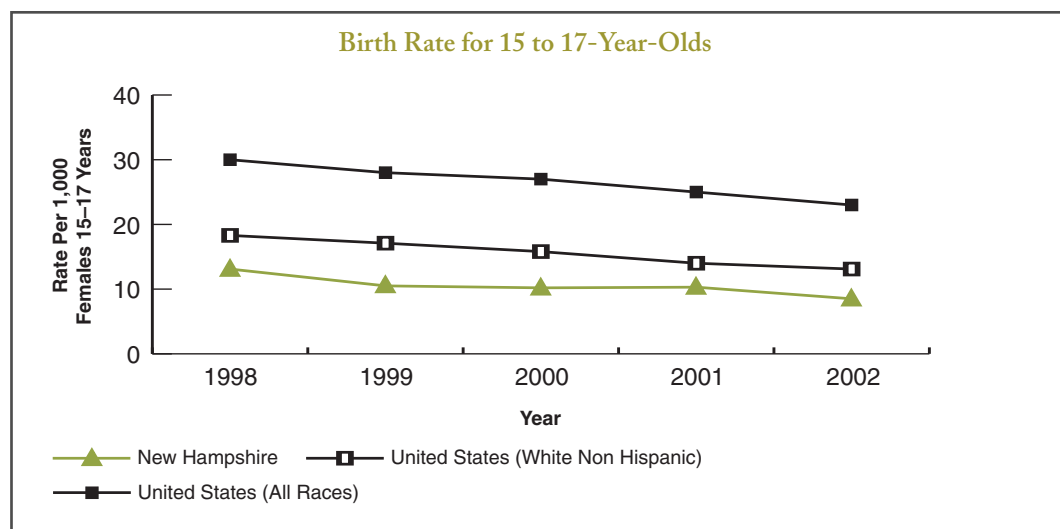
This measure reports on the rate of young teen births in New Hampshire. The US Healthy People 2010 Objective is 43 births per 1,000 women in this age group in the United States.

The Performance Measure

The birth rate per 1,000 for all teen women between 15 and 17 years of age in New Hampshire.

Teen Birth Facts

- Consensus is widespread that the ideal target number of pregnancies and births for women 17 years of age and under should be zero.
- The teenage pregnancy rate in the United States is dropping, but is still twice the rate in England, France and Canada, and nine times as high as in the Netherlands and Japan.¹
- Young teen mothers are 21% more likely than women in their twenties to have low birth weight infants. These babies are at risk for death and learning disabilities.
- Teen births are most common among the poor and pregnancy can negatively impact a young woman's life-long chances for economic success.
- Only one-third of those who have a first baby before age 18 complete high school and only 1.5% complete college by age 30.²



Source: National Center for Health Statistics, NH Birth Records Healthy People 2010 (See Table 7 on page 42).

figure8

What the Numbers Mean

The number of teens having children has been dropping both in New Hampshire and in the United States since the early 1970's. Both New Hampshire and the United States are currently doing considerably better than the Healthy People 2010 goal of 43 births per thousand. In 2002, 13.1 births per thousand occurred among 15 to 17-year-olds in the US. New Hampshire did even better with 8.5 births per 1,000. Since 1990, New Hampshire has consistently had the lowest or second lowest rate of teen births in the nation. The New Hampshire rate is compared both with the overall national rate and with the national birth rate for non-Hispanic white women. The national birth rate among young black and Hispanic women is higher than that for white women. Because 95% of New Hampshire's population is non-Hispanic whites, the non-minority United States population is more comparable to the state than is the overall US population.



The Consequences

High rates of teen births have negative consequences for mothers, babies and the community. Compared with women who start with the same income prior to having a baby, teen mothers are more likely to end up on welfare. Teen mothers are more likely than older women to give birth to low birth weight infants. This difference is likely related both to poverty and to age specific issues such as inadequate diet and limited maternal weight gain. Low birth weight increases the risk of infant death and doubles the chances that a child will have a learning disability.² Teen moms are also more likely to have health problems during pregnancy, such as pregnancy-induced high blood pressure and anemia or iron poor blood. Later in life these young women tend to be at greater risk for high blood pressure and for obesity than women who have their first child later in life.³ Children of teens do less well in school, suffer abuse and neglect more often than children with older parents and are more likely to live in poverty.⁴ Failure to continue to support effective efforts to reduce teen pregnancy could result in significant increases in government spending. If teen birth rates had stayed at the level they were at in the early 1990's, 124,468 more babies would have been born to teens. Each year the federal government alone spends about \$40 billion to help teen parents and their children.⁵

Providers and Partners Working on this Measure

The DPHS, Family Planning Program collaborates with:

- Schools and youth serving organizations
- Health care providers and community agencies, such as community health centers, family planning programs
- Statewide coalitions
- The NH Department of Health and Human Services Temporary Assistance for Needy Families Program

What We Are Doing to Improve the Public's Health Relative to this Measure

The Family Planning Program supports clinical services for adolescents in primary care and family planning sites that offer counseling on abstinence, encouragement of parent-teen communication and access to contraceptive services for those who need them. The Family Planning Program also supports pregnancy prevention education in communities, including abstinence-only programs and more comprehensive programs, allowing communities to select the programs that best meet their needs. The Abstinence Education Program provides funds to local communities to deliver abstinence education messages to youth through standardized curricula. The Adolescence Resource Center at the University of New Hampshire and the DPHS collaborate to gather and disseminate information to help providers work with adolescents to help them reach their full potential in all areas of their lives. All these efforts focus on making education and services available in a way that will support teens and their families.

Prenatal Care

THE MEASURES

The Performance Measure

The percent of infants born to women receiving care beginning in the first trimester and who had Medicaid as a payer source, the percent of infants born to women receiving care beginning in the first trimester and the percent of infants born to women receiving care beginning in the first trimester in the DPHS Maternal and Child Health Prenatal Program.

The Performance Standard

The American College of Obstetricians and Gynecologists defines adequate prenatal care for a healthy full-term pregnancy as that which begins early in the first trimester and includes at least 13 visits with a clinician.¹

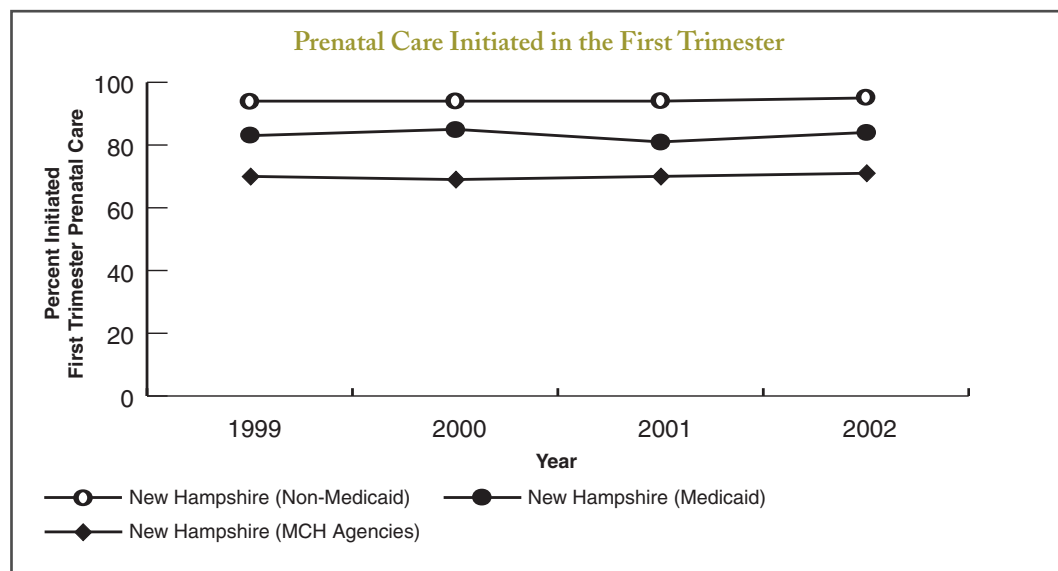
The New Hampshire Prenatal Program defines early entry to prenatal care as a first medical visit occurring before the 14th week of pregnancy.

Prenatal Care Facts

- Prenatal care beginning in the first trimester includes health risk assessments, medical screening for conditions associated with poor birth outcomes and education for pregnant women, resulting in decreased maternal and infant illness, disability and death.
- Initiating prenatal care in the first trimester is more likely to ensure that a woman will receive adequate prenatal care throughout the pregnancy.

This measure reports on the percent of infants born to women receiving care in the first trimester for all births, for births to women on Medicaid and for births to women receiving prenatal care in the DPHS Maternal and Child Health, Prenatal Program.

The US Healthy People 2010 objective and the Healthy NH 2010 target is that 90% of women will begin prenatal care in the first trimester of pregnancy.



Source: NH Birth Records & MCH-funded agency reports (See Table 8 on page 42).

figure9

What the Numbers Mean

The percent of infants born in NH to women receiving prenatal care in the first trimester has gradually increased over the last several years, from 89.5% in 1997 to 91.1% in 2002, so that it now meets the Healthy People 2010 and Healthy NH objectives. However, women whose pregnancy care was covered by Medicaid have consistently lagged behind women with private insurance coverage by 11 percentage points. In 1999 the difference in rates of early entry to care for women with private insurance and women with Medicaid insurance was 91% and 79.6% respectively while in 2002 the rates were 92.7% and 81.1%. These rates clearly demonstrate that even as early entry to prenatal care increases for all women, the gap between public and private insurance is not closing.



In order to significantly improve early entry to prenatal care, the disparity existing between all women and women in the Medicaid insurance program must be eliminated. Whether barriers to care are based on insurance status alone or indicate underlying socio-economic barriers as well, early entry to care promotion and supports must target the specific needs of Medicaid participants.

The Consequences

To assure that women receive health education, medical assessment, health screening and adequate monitoring of prenatal conditions throughout pregnancy, it is critical that prenatal care begin as early as possible. It is less likely that women will receive adequate care throughout their pregnancy if care is begun after the first trimester. The longer the delay in entry to care, the less educational and health screening opportunities are available throughout the course of the pregnancy.

Numerous studies have shown an association between adequate prenatal care and increased birth weights as well as a reduction in preterm births. One study demonstrated that women who receive no prenatal care are seven times more likely to die from complications related to high blood pressure during pregnancy (preeclampsia) and the seizures (eclampsia) that this high blood pressure can cause.²

Providers and Partners Working on this Measure

- Community health centers providing prenatal care
- DPHS contracted prenatal programs in community agencies
- DPHS contracted home visiting programs for pregnant women who are on Medicaid
- The New Hampshire Medicaid Program
- The Children's Program at Dartmouth Hitchcock Medical Center
- The New Hampshire March of Dimes

What We Are Doing to Improve the Public's Health Relative to this Measure

The DPHS, Maternal and Child Health Section (MCHS) funds 11 health care agencies that provide comprehensive prenatal care annually to approximately 1,800 low income, uninsured and underinsured women. Prenatal services include medical care, voluntary HIV testing, health education, nutrition services, social services, substance abuse services, smoking cessation counseling, transportation, translation services, outreach, case management services and pre-certification for Medicaid eligibility and home visiting. The patient population of DPHS-funded agencies is made up of families that are most vulnerable to poor health outcomes and the least likely to enter prenatal care in the first trimester. To provide appropriate care to a vulnerable population, the agencies actively promote early entry to care through varied patient recruitment and retention efforts.

MCHS also funds Home Visiting New Hampshire, a comprehensive preventive program that provides health, education, support, transportation and linkages to other community services to Medicaid-eligible pregnant women and their families—in their homes—to over 700 women per year in 18 sites across the state to provide comprehensive home visiting. Women volunteer to participate in the program early in their pregnancy and receive home visits until their child's first birthday. High-risk pregnancies are closely monitored and the home visiting agency works closely with the prenatal provider to ensure that women understand how to best participate and enhance their prenatal health care.

Smoking During Pregnancy

THE MEASURES

This measure reports on the status of women smoking during pregnancy for all births in New Hampshire.

The New Hampshire Healthy People objective is to reduce the percent of pregnant women who report smoking during pregnancy by 10%.

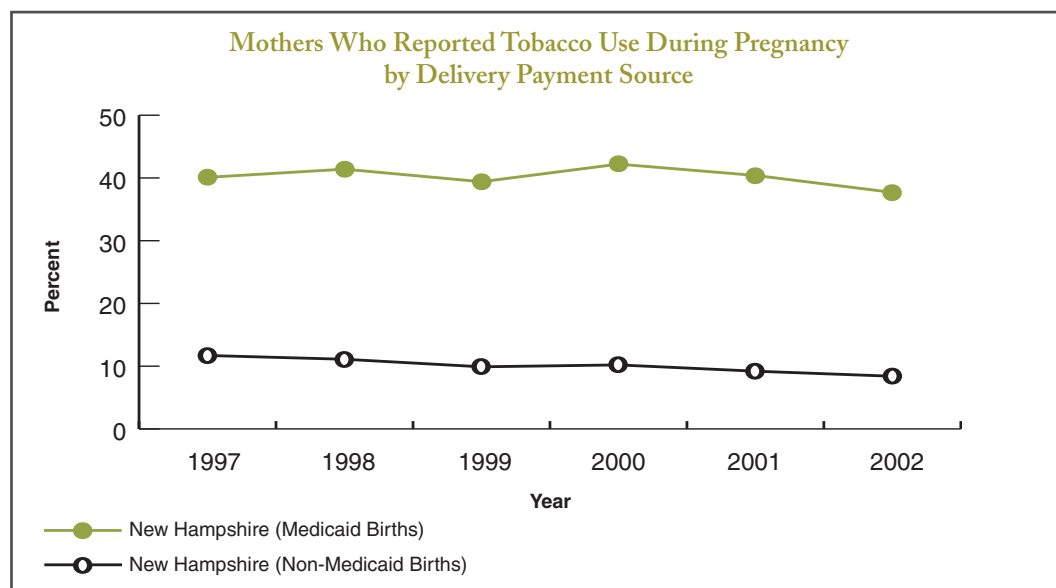
A related Healthy People 2010 objective is to increase the number of women having live births who report abstaining from smoking cigarettes during pregnancy.

The Performance Measure

The percent of women statewide that report smoking during pregnancy.

Smoking During Pregnancy Facts

- Tobacco is shown to have a negative impact on the health of a developing fetus.
- Smoking has been demonstrated to increase the risk of high blood pressure during pregnancy, preterm delivery, low birth weight and infant hospitalizations.
- Women who stop smoking during pregnancy may reduce the risk of prenatal complications as well as infant health conditions such as middle ear infections and asthma.



Source: NH Birth Records (See Table 9 on page 42).

figure10

What the Numbers Mean

The rate of tobacco use by all pregnant women in New Hampshire is 16.6 %. Although this measure has shown a modest decline, disparity remains between the smoking prevalence among all women and the prevalence among those women enrolled in the New Hampshire Medicaid program. As illustrated in the graph above, the percent of women who reported smoking during pregnancy and were participating in the New Hampshire Medicaid program was over three times greater, at 40%, compared with 11.7% of non-Medicaid participating women.

Studies have demonstrated increased rates of smoking based on income, education and race/ethnicity. Thus, the Medicaid data underscores the need to design and target tobacco cessation education, support and clinical interventions to populations at increased risk for tobacco use during pregnancy. Targeting programs toward populations with less formal education, lower incomes, fewer socio-economic resources and a higher rate of smoking will increase the likelihood that a cessation intervention is accessible and appropriate for all pregnant smokers in New Hampshire.

Data on maternal smoking obtained from birth certificates may be an underestimate. According to the National Center for Health Statistics, "While prenatal smoking is believed to be somewhat under-reported on the birth certificate, the trends and variations...have been largely corroborated from nationally representative surveys."



The Consequences

According to a 2001 United States Surgeon General's report, women who smoke are more likely to have difficulty becoming pregnant. Once a woman who smokes becomes pregnant, she has a greater risk for complications that may result in fetal death, such as a spontaneous abortion. Nicotine becomes concentrated in the amniotic fluid and in the placenta (both of which make up the environment of the growing fetus) at greater levels than what is found in the mother's system.

It is recommended that all female smokers stop smoking before they become pregnant.⁴ Smoking is the single greatest risk factor associated with prematurity and low birth weights. Studies have shown that stopping smoking by the first trimester of pregnancy greatly reduces the risk of delivering a low birth weight baby. In addition to the risk to the developing fetus, the woman's health may also be compromised by premature labor. Low birth weight increases the risk of health complications in newborns and infants. The Surgeon General estimates that infant deaths in the United States would decline 10% if all pregnant women refrained from smoking.

The Centers for Disease Control and Prevention have estimated, based on births to New Hampshire women in 1999, that smoking-related complications during pregnancy and delivery accounted for a 3.1% increase in neonatal intensive care unit stays. The resulting total cost in health care dollars was \$1,650,093.⁵

Providers and Partners Working on this Measure

The DPHS Prenatal Program collaborates with:

- Community health centers
- DPHS-contracted prenatal programs in community agencies
- The Children's Program at Dartmouth Hitchcock Medical Center
- The DPHS Tobacco Prevention and Control Program
- JSI Research and Training Institute
- Home Visiting New Hampshire programs for pregnant women and their children
- The New Hampshire Medicaid Program

What We Are Doing to Improve the Public's Health Relative to this Measure

Health care provider intervention has been shown to be effective in motivating patients to quit smoking. Therefore the DPHS Prenatal and Tobacco Prevention Control Programs are educating trainers and prenatal health care providers to deliver a standard smoking cessation intervention that is fully integrated into the clinical practice.

Home Visiting New Hampshire (HVNH) is a preventive program that provides health, education, support and linkages to other community services to Medicaid-eligible pregnant women and their families in their homes. The Maternal and Child Health Section contracts with 18 community-based agencies across the state to provide comprehensive home visiting for over 700 families per year. Home visitors work with pregnant mothers to help them to decrease or stop smoking using information from training developed by a partnership of the DPHS Tobacco Prevention Control Program, Maternal and Child Health Section and WIC (Special Supplemental Nutrition Program for Women, Infants and Children) Program with the March of Dimes, Smoke Free Families Project of the Dartmouth-Hitchcock Medical Center Norris Cotton Cancer Center, and JSI Research and Training Institute.

Breastfeeding

The Performance Measure

The percent of women enrolled in the New Hampshire WIC (Special Supplemental Nutrition Program for Women, Infants and Children) Program breastfeeding their infants at the time of hospital discharge.

THE MEASURES

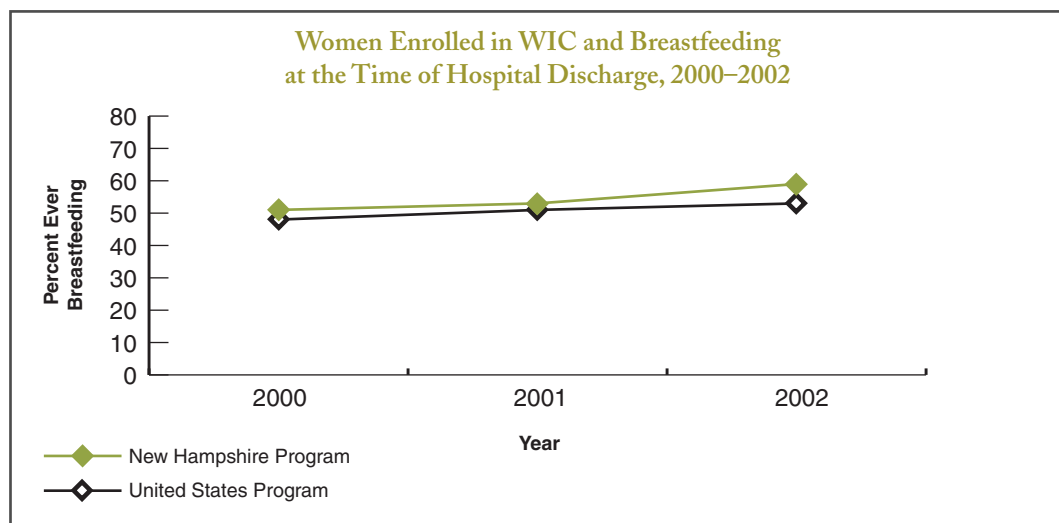
Breastfeeding Facts

- Breastfeeding is one of the most important contributors to infant health, and provides a range of benefits for the infant's growth, immunity and development.^{1,2}
- Breastmilk is the preferred method of feeding for all infants, including premature and sick newborns, with rare exceptions. Breastmilk is ideally suited for the individual nutritional needs of infants, and exclusive breastfeeding is sufficient to support optimal growth and development for approximately the first six months of life.^{1,2}

This measure reports on the percent of women in the DPHS,

WIC Program who are breastfeeding their infants at the time of hospital discharge.

A related US Healthy People 2010 objective is to increase the percent of women breastfeeding in the early postpartum period to 75%.



Source: CDC Pediatric Nutrition Surveillance System (See Table 10 on page 43).

figure11

What the Numbers Mean

Data for the WIC-specific population in New Hampshire from the CDC Pediatric Nutrition Surveillance System show lower rates than the national goal for the year 2010 of 75% women breastfeeding in the early postpartum period. The average rate of breastfeeding at the time of hospital discharge for this population for the years 2000–2002 is 54.3%. Although this rate is slightly higher than the United States WIC population rate of 51.1%, New Hampshire has work to do to achieve the national goal for 2010. The New Hampshire rates continue to increase each year, which is a positive trend among the low-income population enrolled in WIC. Low-income populations generally have lower breastfeeding rates than the general population.²



The Consequences

Many national health organizations recognize breastfeeding as one of the most important contributors to infant health. The American Academy of Pediatrics specifically references the role of breastfeeding in decreasing the incidence and severity of diarrhea, lower respiratory infections and otitis media, as well as possible protective effects against sudden infant death syndrome, diabetes and some chronic digestive diseases. Breastfeeding has also been related to possible enhancement of cognitive development in children.¹

Breastfeeding is considered a promising approach for preventing obesity. Children who are never breastfed are 15%–25% more likely to become overweight, while those who are breastfed for 6 months or more are 20%–40% less likely to become overweight.²

Providers and Partners Working on this Measure

The DPHS, WIC Nutrition Program collaborates with:

- WIC contract agencies that provide statewide services
- The New Hampshire Breastfeeding Task Force

What We Are Doing to Improve the Public's Health Relative to this Measure

The WIC Nutrition Program implements a range of activities to support and promote breastfeeding. Many initiatives focus on low-income families enrolled in the WIC Program, including a breastfeeding peer counselor program in all local WIC agencies. Additional federal funding from the United States Department of Agriculture will allow expansion and enhancements to the program, including the establishment of community outreach and partnerships to expand the effectiveness of the peer counseling program and continued professional training for WIC breastfeeding staff to become certified lactation (breastfeeding) counselors.

Newborns Screened for Hearing

THE MEASURES

This measure reports on the percent of infants born in New Hampshire hospitals who have been screened for hearing. A related US Healthy People 2010 and Healthy NH 2010 objective is to increase the proportion of newborns that are screened for hearing loss by one month.

The Performance Measure

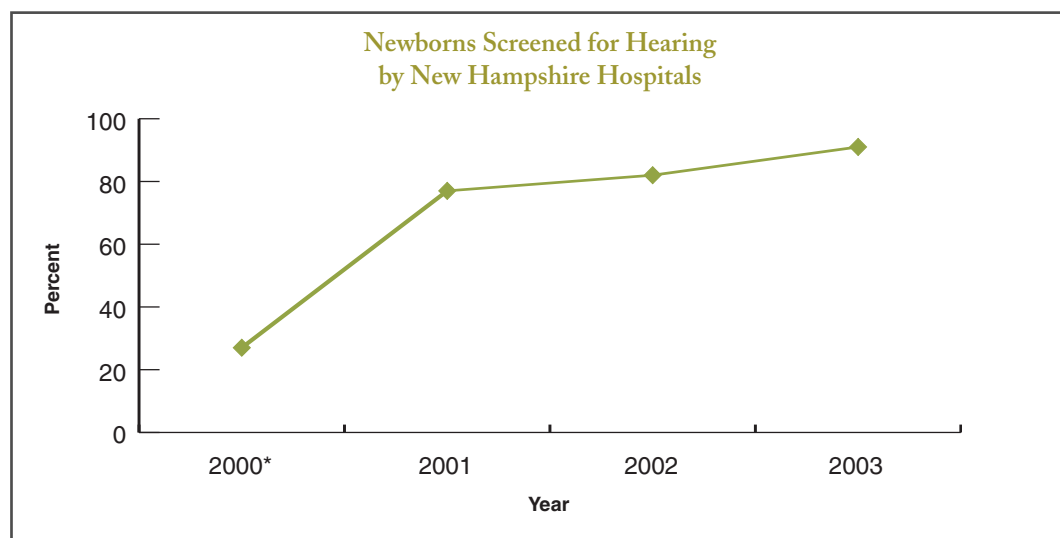
The percent of newborns in New Hampshire that have been screened for hearing before hospital discharge.

The Performance Standard

The Joint Commission on Infant Hearing (2000) and the American Academy of Pediatrics (1999) endorse universal newborn hearing screening with the goal of screening 100% of newborns.^{1,2}

Newborn Hearing Facts

- The technology to screen newborns for hearing is readily available and easy to use.
- The cost for hospital-based newborn hearing screening is low and continues to decrease. Using current technology, the cost ranges from \$10–\$50 per baby depending on the protocol and technology used.³
- Estimates are that three out of every 1,000 newborns have a hearing loss. It is the most frequently occurring birth defect.⁴
- When early identification and intervention occurs, hearing-impaired children make dramatic progress, are more successful in school and become more productive members of society.⁵



Source: NH Early Hearing Detection and Intervention (EHDI) Program (See Table 11 on page 43).
*2000 figure was estimated based on the number of hospitals with Newborn Hearing Screening programs (3) and the number of births at these hospitals (assuming a 100% screening rate within these hospitals).

figure12

What the Numbers Mean

The DPHS Early Hearing Detection and Intervention Program (EHDI) was established in 2000 with the goal of screening all newborns for hearing in the hospital. The rapid success in increasing the number of newborns screened for hearing resulted from the EHDI development of screening standards and protocols, the provision of training and technical assistance to hospitals, and the enthusiastic commitment of hospitals to establish and/or expand hearing screening programs. Improvement was made on this performance measure in each of the past three years. Prior to 2000 only three hospitals were conducting newborn hearing screening; in 2004, 23 hospitals were screening. The number of infants screened continues to rise as more hospitals implement newborn hearing screening programs. Examining data from 2003, New Hampshire is very close to meeting the clinical standard of screening 100% of newborns for hearing.



The Consequences

When children are deaf or hard of hearing and are not screened and identified as such they miss early opportunities to learn language. The most crucial period of brain development occurs before the age of three. Children who are not exposed to language at this time may never achieve the same competence as same age hearing peers. In 1990, the United States Department of Education estimated the annual cost to educate a hearing-impaired child to be \$3,383 for a regular mainstream classroom, \$9,689 for a special classroom and \$35,780 for residential placement. If only 2% of the children identified with hearing loss were educated in a special classroom instead of a residential program, the savings could more than pay for the costs of the newborn hearing screening program in which the children were identified.⁶

Providers and Partners Working on this Measure

The DPHS, Early Hearing Detection and Intervention Program collaborates with:

- Hospitals with birth facilities
- Newly established pediatric audiology diagnostic centers
- Health care providers
- The New Hampshire Pediatric Society
- Educators at HEAR in New Hampshire, a private preschool
- The MICE (Multi-Sensory Intervention through Consultation and Education) Program, a collaborative education program for children with sensory impairments
- The DPHS, EHDI Advisory Committee comprised of professionals, consumers and parents
- Representatives of the deaf community
- Northeast Deaf and Hard of Hearing Services

What We Are Doing to Improve the Public's Health Relative to this Measure

The EHDI Program works with the program advisory committee to develop protocols, policies and procedures for hospital newborn hearing screening and to develop educational materials for parents and professionals about newborn hearing screening. EHDI staff visit hospital screening programs to provide training, technical assistance and to monitor quality. The program provides training for health professionals, including nurses, primary care providers and audiologists on newborn hearing screening and follow-up. Any infants who do not pass newborn hearing screening need audiologic evaluation by audiologists specifically trained to test infants. The EHDI Program has recently established pediatric audiology diagnostic centers in several areas of the state such that families have easy and timely access to these services. A state-of-the-art tracking system is in place to assure that all infants born in New Hampshire are screened and receive proper follow-up if necessary. The program is developing a resource book for families of babies who are deaf or hard of hearing to assist them in finding the services they need.

Quality

IMPROVEMENT

Introduction to Quality Improvement *What is Quality Improvement?*

Quality improvement (also known as continuous quality improvement and performance improvement) is the establishment of a program or process to manage change and achieve quality improvement in public health policies, programs or infrastructure based on performance standards, measurements and reports.¹

A quality improvement process brings consistency to an agency's approach to managing performance, motivates improvement and helps capture lessons learned. An established quality improvement process may focus on an aspect of performance such as customer satisfaction, or cut across the entire health agency.² According to the Performance Management System model, a quality improvement process:

- Uses data for decisions to improve policies, programs and outcomes.
- Manages change.
- Creates a learning organization.

Components of a quality improvement process may include:


- A person or a committee responsible for overseeing performance improvement on a regular basis.
- Tracking data on performance measures to monitor progress and reporting outcomes through graphs or charts.
- Developing performance improvement plans which specify timeline, actions and responsible parties.
- Reporting progress back to stakeholders and incorporating feedback into established policies.

The concept of quality improvement is not new. In the 1950's, W. Edward Deming, a professor and management consultant, transformed traditional industrial thinking about quality control with his emphasis on employee empowerment, performance feedback and measurement-based management.³ Although subsequent models, such as Total Quality Management in the 1980's were utilized in the private sector, quality improvement is a relatively new concept in public health.

Quality Improvement at Work

To facilitate quality improvement, agencies at the state and local level have implemented specific approaches. For example, the DPHS re-engineered its grantee site visit process modeled after the state of Florida's approach of sending performance data in advance, making quality audits a grantee responsibility, and reserving most of the site visit time for developing quality improvement strategies. The DPHS aims to leave each site visit with a quality improvement plan specifying what both state and local agencies will do to bolster performance.⁴

Agencies that contract and partner with the DPHS also have implemented quality improvement systems. For example, Ammonoosuc Community Health Services, a community health center that serves the northern part of the state, uses its quality improvement process as an opportunity to constantly look at ways they can improve services provided to their clients. Their process includes a quality improvement team comprised of their medical director, physicians, nurses, patient care coordinator and the agency's director. They use graphs to track data on selected performance measures based on indicators required by federal and state funders. Reports are distributed monthly to a Board of Directors, staff and financial stakeholders. The organization then develops a detailed performance improvement plan and evaluates implemented changes.



A comprehensive quality improvement process does not just look at outcomes but the process to get there. The DPHS, Tobacco Prevention and Control Program provides funds to coalitions in communities around New Hampshire to increase the number of smoke-free workplaces in the state. These coalitions are asked to report each step of the process, not just the final outcome. Because the program has the ability to track progress toward the outcome, it can determine which activities lead to increased numbers of smoke-free workplaces and can share these strategies among coalitions.

Quality Improvement at a Glance

Avis Goodwin Health Center, community health center in Rochester, NH

The Health Issue: Lead poisoning can cause learning disabilities, behavioral problems, and, at very high levels, seizures, coma and even death. Because lead poisoning often occurs with no obvious symptoms, it is important that proper lead screening guidelines for children are followed.

The Problem: The Center was screening only 33% of children ages 6–17 months for blood lead levels.

The Gap: The average for all community health centers and maternal and child health agencies combined was 75%. This agency was 42 percentage points lower than the state average.

The Cause: The recommended protocols for lead screening were not followed universally by all medical providers. Documentation of screening was incomplete. Some children were seen for illness but their parents were not reminded to schedule routine preventive visits at which time a lead screening could take place, or screened at that time.

The Quality Improvement Approach:

- Chart audits by staff.
- Increased family education about lead.
- Professional development training on lead.

The Outcome: Lead-screening rates increased from 33% to 90%.

Quality Improvement Up Close

Even before New Hampshire developed its performance measures for public health grantees, the DPHS staff suspected that the Avis Goodwin Health Center in Rochester, New Hampshire was having difficulty meeting clinical targets. On repeated site visits by the DPHS, the agency showed no improvement in immunization rates and discussions with Center staff revealed they were not following protocols for screening children for lead poisoning.

But state officials and Center staff had no way of tracking problems, and routine site visits and chart audits by the state—which provided only snapshots of the Center’s performance—were not enough to reveal trends that could help the Center’s performance.

One example was the lead-screening program, says Joan Ascheim, who heads the DPHS’s new Bureau of Policy and Performance Management: “We could do a chart audit and see if the Center was screening particular individuals. But there was no way to quantify what was happening overall.” As soon as the DPHS began using performance measures in 2002, officials quickly saw that the Center screened blood lead levels for only 33% of children ages six to 17 months. Both the DPHS and the Center were beginning to discover where the leaks were.

Frank Ramirez, Avis Goodwin Health Center CEO, saw the benefits of the state’s performance management efforts and used this opportunity to enhance the Center’s quality improvement process. While the DPHS provided Ramirez with annual screening data comparing the Center’s performance with other state community health agencies, the Center’s problems inspired Ramirez to begin examining their performance on a quarterly basis. For example, the Center staff began completing their own chart audits to see how they were doing, increased family education about

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“Most of us involved in the program thought ‘Oh yes, we already screen all young women for chlamydia. We’ll just let everyone know we’re already doing it.’”

Kathy Desilets,
DPHS Family Planning
Program Manager

lead and completed additional professional development training. Each quarter, staff strategizes about what is working and what is not to raise the lead screening rates.

“The state has been a real partner to us,” says Ramirez. “We have gained a lot from their honest and open discussions with us about where we could improve,” he notes.

At the state’s most recent site visit with Avis Goodwin, lead screening rates were near 90%. They also improved performance in other areas. For example, the percent of pregnant smokers who receive tobacco cessation counseling is now 91%, up from 60%. The Center’s target was 84%.

Staff has become more motivated to reach goals they can clearly see, and Ramirez says he often sees them making phone calls during lunch or after hours to follow up with a patient to ensure progress.

“We have moved from quality assurance—oftentimes creating a reactionary ‘It’s broken, let’s fix it’ scenario—to a continuous quality improvement process where we are now monitoring outcomes on a regular basis. It has become a part of the way we do business,” says Ramirez.⁵

Quality Improvement at a Glance

NH Statewide Family Planning Program

The Health Issue: Chlamydia, a sexually transmitted infection that can lead to infertility, occurs most frequently in young women. The Centers for Disease Control recommends that all women under 25 are tested for chlamydia every year.

The Problem: Low screening rates for chlamydia at DPHS-funded local family planning clinics.

The Gap: The average rate of screening for family planning agencies was 8%, well below the target of 50%.

The Cause: Family planning programs were screening women under 25 who were new patients but were not following recommendations for annual screening unless their medical history indicated a risk for chlamydia.

The Quality Improvement Approach:

- The DPHS Family Planning Program distributed quarterly reports showing each agency what its performance was on the measure for screening all women under 25 regardless of their history. Reports also showed how it compared to other agencies in the state.
- Local sites developed action plans which included: offering training to providers, regularly monitoring the data and adapting appropriate counseling messages to be delivered to clients.

The Outcome: Chlamydia screenings for women under 25 at DPHS-funded family planning clinics increased from 13% to 36%.

Quality Improvement Up Close

Chlamydia, a sexually transmitted infection that can lead to infertility, occurs most frequently in young women.⁶ It is a problem that family planning agencies, which care for the reproductive health of a client group made up in large part of women under 25, recognize as one they can and should address. Back in 1995, the federal Infertility Prevention Project (IPP) provided support to states to help them increase the number of women screened for chlamydia. Routine annual screening of all women under the age of 25 as a standard became the national goal and a goal in New Hampshire.

When the DPHS Family Planning Program looked at this goal, clinicians, managers and the family planning staff all believed that it was just a formality.

“Most of us involved in the program thought ‘Oh yes, we already screen all young women for chlamydia. We’ll just let everyone know we’re already doing it,’” says Kathy Desilets, DPHS Family Planning Program Manager. However, the reality was quite different from what providers believed. In actuality, reports showed that less than 25% of young women were getting a test every year.



The first step in understanding this data was to question why it was so different from the perceptions of family planning providers. A series of conversations and chart audits soon yielded an answer. The family planning clinics were screening most young women at the time of their initial physical examination. Women who came for a pregnancy test or for a visit without an exam did not get a test. This meant that young women who did not get physical exams, but who were at risk for chlamydia, were not screened. In addition, women who did not report new partners when they returned the second year did not get a test. The annual screening recommendation was not followed. To change these practices, the first step was education to help providers understand the importance of annual screening rather than testing based on risk history or on whether a woman had a physical exam.

Because this was a problem occurring at a variety of clinics across the state, the Family Planning Program, starting with the sites in the areas of the state with the highest rates of chlamydia, began to use federal funds from the IPP to support increased chlamydia screening. In addition, the program went to all the sites and shared data that showed how important it is to screen all women under 25 regardless of their history. The key facts: most infections have no symptoms and CDC recommends that all women under 25 have a chlamydia test every year.

Chlamydia screening began to be a higher priority at the sites, but for many providers, the change to screening all young women versus those with reported risks was a big one.

The Family Planning Program recognized that there was more work to be done. When DPHS programs began to require performance measures as a part of their contracts with service providers, the Family Planning Program made chlamydia screening for women under 25 one of its measures.

“The performance measure system became a way to build a partnership between the state and the local programs to improve performance. The DPHS had the ability to help the program sites track how they were doing on the various measures,” says Desilets. The program began to distribute quarterly reports showing each agency what their performance was on each measure. This report also included a graph that showed how each agency’s performance compared with that of other agencies in the state. As shown in this chart, the data provided the median (midpoint) and average scores for the state and each site was assigned a number and could see where their performance fell along the state range.

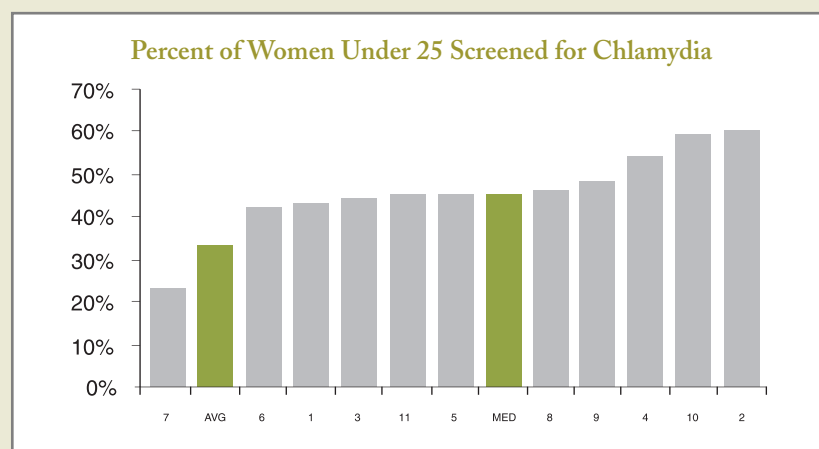


figure13

Source Data: Calculated from Region 1 Family Planning Data System.

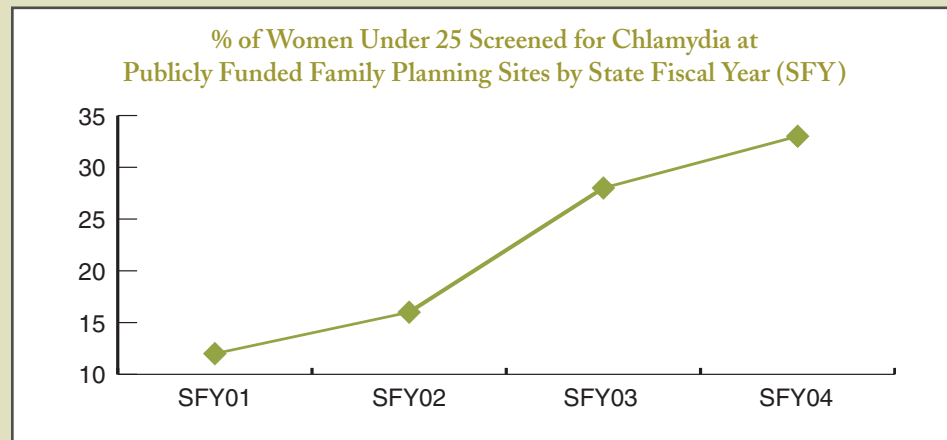
The real action needed to increase screening had to happen on the local level. Seeing the data on a regular basis and being able to compare their progress with that of their peers increased the interest of all the sites to improve performance. The sites developed action plans to improve their

Quality

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performance in screening young women for chlamydia including: offering training to providers, regularly monitoring the data and adapting counseling messages so that young women were assured that this was a standard, routine test. The Family Planning Program provided feedback and suggestions to help the sites take direct and appropriate actions. In some cases, sites recognized that they were not adequately capturing the data to demonstrate their performance and those sites made changes in their data systems or worked with providers to assure that all the tests that were done were recorded.

Through a coordinated system of data sharing, data review and actions taken by local agencies to address the issue, the overall statewide rate of screening for women less than 25 years old for chlamydia began to increase from 13% in 2000 to 36% in 2004, and this increase continues.



Data Source: Calculation from Region 1 Family Planning Data System.

figure14

The current state goal is that 50% of all women under 25 are screened each year at family planning sites. There is still room for improvement toward that goal, but all of the sites are aware of the need to improve, the degree to which they are improving and the various possible steps to enhance their screening performance.



Making Things Better

CONCLUSION

Making Things Better

Performance management may, at first glance, seem a complex concept to understand and a difficult approach to carry out. In reality, it is actually quite basic to understand and achievable with the right level of commitment. In a recent article in *Government Finance Review*, Peter Hutchinson, a former school superintendent and now a consultant and partner in the Public Strategies Group, relates an experience he had speaking to a fourth grade class which makes this point. During the class he asked the students if anyone knew what leadership was. One astute student answered, “A leader is someone who goes out and changes things to make things better.” Mr. Hutchinson asserts that the fourth grader summarized exactly what government should do and what citizens should expect of its government—to change things to make things better.¹ Simply stated, that is the purpose of the DPHS performance management approach.

Through this report we examine what we can change to improve the public health services we provide. For example, we need to change our approach to helping pregnant woman whose source of payment is Medicaid to access prenatal care earlier and to quit smoking so that these outcomes are closer to those of women who have private insurance. We will continue our commitment to measure our performance, based on recognized public health standards, report on it publicly and adapt approaches to improve services as necessary employee interventions to address these issues by making them affordable, arranging for transportation, reaching out to prospective clients in their communities and providing written materials that are in the appropriate language or through the use of interpreters.

Data Tables

Data Notes: Confidence Intervals (CIs)

Several of the tables in this report include 95% confidence intervals. When comparing rates over time or between groups it is necessary to consider the influence of random variation on the data. The result of this issue will tend to be greater with fewer records. A 95% confidence interval is a range of values in which the true value can be expected, under similar circumstances, 95% of the time.

Women Screened With Pap Test by BCCP Who Had Rarely or Never Had a Previous Pap Test				
BCCP reporting period		1/99–6/02	7/02–6/03	7/03–12/03
NH Program	Total Number Screened	3,834	1,879	688
	Percent	31%	36.3%	37.6%
US Program	Total Number Screened	485,292	160,093	77,749
	Percent	21.4%	21%	19.6%

Data Source: Centers for Disease Control National Breast and Cervical Cancer Early Detection Program, Minimum Data Elements Report

table1

At Least Twice Yearly A1C Testing Among Persons with Diabetes				
Year		2000	2001	2002
NH	Percent—Age Adjusted	74.9	74.9	74.9
	95% CI	68.5–81.2	70.3–79.6	71.1–78.7
US	Percent—Age Adjusted	65.9	64.5	68.1
	95% CI	62.8–69	61.9–67	65.7–70.5

Data Source: Centers for Disease Control Behavioral Risk Factor Surveillance System.

table2

Rates are age adjusted. To compare populations where the distribution of age groups is different, an adjustment needs to be made. For example, the rate of diabetes in New Hampshire may appear higher than that of the United States. However, this may be due to New Hampshire having a greater proportion of older people than the United States. By age-adjusting the New Hampshire data using the 2000 United States standard population, rates can be compared without concern about differences in the age distribution of the two populations.

US estimates are based on one year of data, while NH estimates are generated by combining 3 years of data.

Persons residing in nursing homes and in households without telephones are not included in this survey; therefore, these results cannot be generalized to those segments of the population. All data in the BRFSS are obtained by self-report and are subject to recall bias or may be under-reported or over-reported. Self-report of diabetes and self-report of socio-demographic characteristics are highly accurate. Self-report of A1C measurement has been shown to have a high sensitivity and low specificity. www.cdc.gov/diabetes/statistics/preventive/methods.htm accessed on January 19, 2005.

Number of Chlamydia Diagnoses and Percent Receiving Adequate Treatment in New Hampshire STD clinics, 2002 and 2003		
Year	2002	2003
Number of Cases	270	300
Percent Adequately Treated	95.9	96.3

Data Source: NH Communicable Disease Control and Surveillance Section.
Adequate treatment defined as treatment received within 30 days of diagnosis according to protocols defined by the Physician's Desk Reference (PDR).

table3

New Hampshire Second and Third Graders
with Sealants in School-based Programs, 1999–2003

Year	1999–2000	2000–2001	2001–2002	2002–2003
Number of Students Screened	4,875	6,566	7,255	7,609
Number of Dental Sealants	1,863	2,549	2,895	2,994
Percent with Dental Sealants	38	39	40	39

Data Source: NH Oral Health Program.

table4

US & NH Motor Vehicle Occupant
Emergency Department Visits* 2000–2002 (Ages 15–19)

Year		2001	2002	2003
NH	Rate	2,554	2,276	2,316
	95% CI	2,448–2,660	2,176–2,375	2,216–2,415
US	Rate	2,566**	2,353	2,214
	95% CI	2,056–3076	1,930–2777	1,850–2,578

*Rate per 100,000 15 to 19-year-olds.

**National estimate for 2000 was computed using data obtained from July through December of that year.

This estimate may be subject to the effects of seasonality and therefore is not directly comparable to later years.

NH Data Source: Health Statistics Data Management Section, NH DHHS DPHS.

US Data Source: Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control Web-based Injury Statistics Query and Reporting System (WISQARS).

table5

Current 9th–12th Grade Student Smokers

Year		1995	1997	1999	2001	2003
NH	Percent	36	NA*	NA*	25.3	19.1
	95% CI	33.2–38.8	NA*	NA*	21.7–28.9	16–22.2
US	Percent	34.8	36.4	34.8	28.5	21.9
	95% CI	32.5–37.1	34.1–38.7	32.3–37.3	26.5–30.5	19.8–24

*NH Data is not presented for 1997 and 1999 due to low response rates.

Data Source: Youth Risk Behavior Survey, Youth Tobacco Survey.

table6

Data Tables

Birth Rate* for 15 to 17-Year-Olds						
Year		1998	1999	2000	2001	2002
NH	Rate	13.1	10.5	10.2	10	8.5
	95% CI	11.7–14.5	9.2–11.8	9–11.4	9.1–11.5	7.4–9.6
US: White Non-Hispanic (rate per 1,000 live births)	Rate	18.3	17.1	15.8	14	13.1
	95% CI	18.2–18.4	17–17.2	15.7–15.9	13.9–14.1	13–13.2
US: All Races	Rate	29.9	28.2	26.9	24.7	23.2
	95% CI	29.8–30	28.1–28.3	26.8–27	24.6–24.8	23.1–23.3

*Rate per 1,000 births to 15 to 17-year-old females.

NH Data Source: NH Birth Records.

US Data Source: Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML.

Births: Final data for 2002. National vital statistics reports; vol 52 no 10.

Hyattsville, Maryland: National Center for Health Statistics. 2003. Revised June 2004.

Note: US 95% Confidence Intervals (CI) calculated using number of births from the National Vital Statistics Reports Final Data for respective years.

table7

Prenatal Care Initiated in the First Trimester*					
Year		1999	2000	2001	2002
NH Non-Medicaid	Percent	94.4	94.3	94.3	95.4
	95% CI	93.9–94.9	93.8–94.8	93.8–94.8	95–95.8
NH Medicaid	Percent	83.2	84.8	81	84.2
	95% CI	81.7–84.7	83.4–86.2	79.4–82.6	82.8–85.6
NH MCH Agencies	Percent	70	69	70	71
	95% CI	68–72	67–71	68–72	69–73

*Medicaid/Non-Medicaid figures represent births to NH residents only. Births with unknown or missing payer information are not included.

Data Source: NH Birth Records & MCH-funded agency reports.

table8

Mothers Who Reported Tobacco Use During Pregnancy by Delivery Payment Source							
Year		1997	1998	1999	2000	2001	2002
NH Medicaid Births	Percent	40.1	41.4	39.4	42.2	40.4	37.7
	95% CI	38.3–42	39.4–43.3	37.5–41.3	40.3–44.1	38.5–42.4	35.9–39.5
NH Non-Medicaid Births	Percent	11.7	11.1	9.9	10.2	9.2	8.4
	95% CI	11.1–12.4	10.4–11.7	9.3–10.5	9.6–10.8	8.7–9.8	7.9–9

Data Source: NH Birth Records.

Note: Confidence intervals (CI) do not take into account the substantial effect of underreporting as discussed in the text section of this performance indicator.

table9

Women Enrolled in WIC and Breastfeeding at Time of Hospital Discharge, 2000–2002				
Year		2000	2001	2002
NH	Number of women enrolled in WIC who gave birth	792 ^{*/**}	6,942 ^{**}	6,237 ^{**}
	Number of women enrolled in WIC who were breastfeeding at time of hospital discharge	404 [*]	3,679	3,680
	Percent of women enrolled in WIC who were breastfeeding at time of hospital discharge	51	53	59
US	Number of women enrolled in WIC who gave birth	1,885,738 ^{**}	1,774,402 ^{**}	1,828,732 ^{**}
	Number of women enrolled in WIC who were breastfeeding at time of hospital discharge	905,154	904,450	969,280
	Percent of women enrolled in WIC who were breastfeeding at time of hospital discharge	48	51	53

Data Source: Centers for Disease Control, Pediatric Nutrition Surveillance System.

^{*}Due to data transmission problems with CDC, NH breastfeeding data for the year 2000 appear significantly lower than data for subsequent years. Although the numbers appear lower, the sample size is considered large enough to be representative and comparable to subsequent years.

^{**}Numbers indicated for women who gave birth were determined by calculating number of women enrolled in WIC and breastfeeding at time of hospital discharge divided by percent of women enrolled in WIC who were breastfeeding at time of hospital discharge.

table10

Infants Screened by NH Newborn Hearing Screening Program				
Year	2000	2001	2002	2003
Percent Screened	27 [*]	77	82	91
Number Screened	3,772 [*]	9,187	11,033	12,655

^{*}2000 figure was estimated based on the number of hospitals with Newborn Hearing Screening programs (3) and the number of births at these hospitals (assuming a 100% screening rate within these hospitals).

Data Source: NH Newborn Hearing Screening Program.

table11

Data Sources

SURVEYS

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a population-based, random-digit, dialed telephone survey of civilian, non-institutionalized adults, aged 18 years and older. The survey is coordinated by the Centers for Disease Control and Prevention (CDC) and is conducted annually by all states. In New Hampshire, the Bureau of Disease Control, Health Statistics and Data Management Section is responsible for the survey. The BRFSS includes questions on health behavior risk factors such as safety belt use, diet, weight control, tobacco and alcohol use, physical exercise, preventive health screenings, and use of preventive and other health care services. The data are weighted to more accurately reflect the population by accounting for age, gender, geographic location and probability of selection.

CDC Pediatric Nutrition Surveillance System

The Pediatric Nutrition Surveillance System is a child-based surveillance system that monitors the nutritional status of low-income children in federally funded maternal and child health programs. Data on birth weight, short stature, underweight, overweight, anemia and breastfeeding are collected for children who visit public health clinics for routine care and nutrition services, including education and supplemental food. Data are collected at the clinic level and submitted to the CDC for analysis.

National Youth Tobacco Survey

The National Youth Tobacco Survey (NYTS) was last conducted in 2002. The American Legacy Foundation in collaboration with the CDC conducted this survey to measure tobacco use among middle and high school students. The NYTS is representative of students in grades 6–12 in public and private schools in all 50 states and the District of Columbia. A three-stage sample design was used to produce a nationally representative sample of students. Students completed a self-administered questionnaire in the classroom, recording their answers on an answer sheet. Results were obtained anonymously and the overall response rate was 75%.

Youth Risk Behavior Survey

The Youth Risk Behavior Survey (YRBS) is a component of the Youth Risk Behavior Surveillance System, an epidemiologic surveillance system that was established by the CDC to monitor the prevalence of youth behaviors that most influence health. The national school-based YRBS data are gathered through biennial school-based surveys that are self-administered in classrooms to predominantly 9th through 12th grade students. National data are weighted to make the information representative of students in grades 9–12 in public and private schools in the 50 states and the District of Columbia. Survey procedures are designed to protect the students' privacy by allowing for anonymous and voluntary participation. The students complete the self-administered questionnaire in their classrooms during a regular class period, recording their responses directly on a computer-scannable booklet or answer sheet.

REPORTS

Healthy People 2010

Healthy People 2010 is a set of national health targets for the next decade. It builds on initiatives pursued over the past two decades, including the 1979 Surgeon General's Report, *Healthy People*, and *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. It is designed to achieve two overarching goals: 1. increase quality and years of healthy life; and 2. eliminate health disparities.

Healthy New Hampshire 2010

Healthy New Hampshire 2010 is New Hampshire's health promotion and disease prevention agenda for the first decade of the 21st century. Similar to Healthy People 2010, it is a compilation of health objectives for the next decade.

National Vital Statistics Report (Births—Final Data 1998–2002)

These reports from the National Center for Health Statistics (NCHS) provide statistical breakdowns such as state and age (including teen mother data). State laws require birth certificates be completed for all births, and federal law mandates national collection and publication of births and other vital statistics data. The National Vital Statistics System, the federal compilation of this data, is the result of the cooperation between the National Center for Health Statistics (NCHS) and the states to provide access to statistical information from birth certificates.

New Hampshire Oral Health Data

Data includes annual reports from school based dental programs. During 2002–2003, there were 16 school-based dental programs in New Hampshire. Approximately 24% (7,609/31,067) of students in 2nd and 3rd grades in public schools in New Hampshire were screened in school-based dental programs during the 2002–2003 academic year for untreated decay, history of decay and dental sealants.



PROGRAM DATA

CDC National Breast and Cervical Cancer Early Detection Program, Minimum Data Elements

The Minimum Data Elements (MDEs) are a set of standardized data elements developed to ensure that consistent and complete information on screening location, patient demographic characteristics, screening results, diagnostic procedures, and treatment information are collected on women screened or diagnosed with program funds. These are the data items that are minimally necessary for the programs and the CDC to manage the program. Programs are encouraged to collect additional data for local program management purposes. The MDEs are collected for each screening event for each woman, computerized, converted into a standardized format, and transmitted to the national contractor.

CDC, Web-Based Injury Statistics Query and Reporting System

The CDC's National Center for Injury Prevention and Control provides customized injury-related mortality data and nonfatal injury data through an interactive, online database.

NH DHHS-DPHS, Early Hearing Detection and Intervention Program

Newborn hearing information is reported to the Early Hearing Detection and Intervention Program by the 23 hospitals that conduct newborn hearing screenings. Data is reported through a web-based system. Personal identifiable information, hearing screening results, and diagnostics test results from audiologists are entered into the system.

NH DHHS-DPHS, Maternal and Child Health-Funded Agency Reports

Prenatal care data is collected by Maternal and Child Health from quarterly reports submitted by funded agencies. Data includes information from client data files and clinical outcomes. Patient demographics and client outcomes are reported on by each agency for each patient.

SURVEILLANCE DATA

NH DHHS-DPHS, Communicable Disease Surveillance Section-Chlamydia Data

Chlamydia data, like all other disease surveillance data, is collected via hard copy (case report), and entered into an electronic database. Names, addresses and other personally identifiable data are maintained in both hard copy and the electronic database and are subject to our confidentiality and security requirements. Data is transferred to CDC via the Secure Data Network through encrypted files with identifiers removed.

NH DHHS-DPHS, Health Statistics and Data Management Section Hospital (Inpatient and Outpatient) Data

The Health Statistics and Data Management section has statutory authority to collect, store, analyze and report New Hampshire health-related data, including birth and hospital information for DHHS and community customers. Motor vehicle data statistics are derived from analysis of hospital inpatient and outpatient data. Inpatient data contains discharge records on all admissions for stays at New Hampshire acute care hospitals for 24 hours or more (available approximately 10 months after the close of the calendar year). The outpatient data sets contain discharge records for hospital visits for scheduled ambulatory surgeries, all visits for medical services when the patient is released from the emergency department, and all observation stays in the emergency department after illness or injury (available 14 months after the close of the calendar year).

Appendix

PERFORMANCE MEASURES USED IN THE DIVISION OF PUBLIC HEALTH SERVICES

Bureau of Prevention Services

CHRONIC DISEASE PREVENTION AND CONTROL SECTION

Breast and Cervical Cancer Program

20% of women who receive a Breast and Cervical Cancer Program-funded Pap test have not had a Pap test with 5 years.

75% of all Breast and Cervical Cancer Program-funded mammograms will be provided to women 50 years and older.

Maintain a 65% prescreen rate of continuously eligible and enrolled women.

Diabetes Education Program

Percent of HgbA1C tests within past year.

ALCOHOL, TOBACCO AND OTHER DRUG PREVENTION SECTION

Tobacco Prevention and Control Program

Percent of adults reporting that a physician spoke to them about smoking/quitting.

Number of provider practices receiving Public Health Service Guidelines lunch and learn workshops.

Percent of students who respond “definitely yes” that smoking 1–5 cigarettes/day is harmful.

Percent of adults employed indoors with work-place policies forbidding smoking in work and public areas.

Number of adult coalition members during the reporting period.

Number of smoke-free worksite policies adopted during reporting period by businesses your coalition has worked with.

NUTRITION AND HEALTH PROMOTION SERVICES SECTION

WIC Nutrition Program

Percent of pregnant women enrolled in WIC by 14 weeks gestation.

Percent of WIC-enrolled infants breastfed at hospital discharge.

Percent of WIC-enrolled infants breastfed at 2 months, 4 months and 6 months of age.

Bureau of Community Health Services

MATERNAL AND CHILD HEALTH SECTION

Family Planning Program

Percent of women under 25 enrolled at family planning agencies that are screened annually for chlamydia.

Percent of clients enrolled at family planning agencies who are Medicaid recipients.

Percent of clients enrolled at family planning agencies who are under 20 years of age.

Rate of births for youths aged 15–17.



Prenatal Program

Percent of infants born to women receiving care beginning in the first trimester.

Percent of infants born to women receiving care beginning in the first trimester who had Medicaid as a payer source.

Percent of women statewide who smoked during pregnancy.

Percent of very low birth weight live births.

Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates.

Percent of pregnant women who were screened for substance abuse during each trimester of pregnancy.

Percent of pregnant women who were screened for genetic anomalies by Maternal Serum Alpha Fetal Protein.

Adolescent Health Program

Reduce the suicide rate for youths aged 15–19.

Reduce the death rate caused by motor vehicle crashes for youths aged 15–19.

HIV/STD PREVENTION SECTION

STD Program

Percent of STD clinic clients with a laboratory diagnosis of chlamydia, gonorrhea or syphilis who receive adequate treatment within 30 days of diagnosis.

RURAL HEALTH AND PRIMARY CARE SECTION

Rural Health and Primary Care Program

Current patient payer mix, with any changes since the previous quarter for community health centers.

Accounts receivable, in days—quarterly for community health centers.

Accounts payable, in days—quarterly for community health centers.

Days of cash on hand for community health centers.

Operating margin—annual, for community health centers.

Oral Health Program

Number of clients receiving restorative care.

Percent of second and third graders receiving sealants in school-based or linked programs.

Bureau of Disease Control and Laboratory Sciences

DISEASE CONTROL SECTION

Immunization Program

Percent of two-year-old children who have completed the 4:3:1:3:3 immunization series (4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hep B).

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